Check List the journal of biodiversity data
ANNOTATED LIST OF SPECIES

Annotated checklist of the marine ichthyofauna of Mauritania from shallow-water habitats and artisanal fish markets

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Abstract. Due to their location in a strong upwelling area, Mauritanian waters are one of the most nutrient-rich and productive areas in the eastern Atlantic Ocean. On the Mauritanian coast, a remarkably high biodiversity consisting of tropical, subtropical, and temperate species with overlapping distributions can be found. This study reports 104 fish species from 53 different families from this area. Overall, the findings indicate Mauritanian waters as a coastal area with high biodiversity and occurrences of several critically endangered elasmobranch species such as *Sphyrna lewini* (Griffith & Smith, 1834) and *Glaucostegus cemiculus* (Geoffroy Saint-Hilaire, 1817). Moreover, this survey indicated an urgent need for updates concerning the IUCN Red List classification of several Mauritanian species, which serve as an essential income source for artisanal fishermen in Mauritania.

Key words. Biodiversity, fisheries, upwelling, West Africa

Knorrn AH, Moctar SMM, Sonnewald M, Dia M, Niang A, Freiwald A (2025) Annotated checklist of the marine ichthyofauna of Mauritania from shallow-water habitats and artisanal fish markets. Check List 21 (1): 148–176. https://doi.org/10.15560/21.1.148

INTRODUCTION

One of the most nutrient-rich and productive ecoregions in the Atlantic Ocean stretches along the northwestern African coast (Demarcq and Soumou 2015). This region is part of the Canary Current Large Marine Ecosystem (CCLME) and is strongly influenced by permanent upwelling in the north and seasonal upwelling in the south of the Mauritanian coast (Heileman and Tandstad 2009; Pelegrí and Peña-Izquierdo 2015). The upwelling, caused by a wind-induced Ekman transport, brings nutrient-rich deep water to the surface. The prevailing northeasterly trade winds along the northwest African coast lead to an offshore movement of surface water. This process enables the upwelling of cold, nutrient- and oxygen-rich water from the subsurface layers, a phenomenon that is particularly intense off the Mauritanian shelf. Additional nutrients enter the waters through the steady input of Saharan aeolian dust to the sea by the prevailing northeastern trade wind system. These environmental conditions not only foster a remarkably diverse array of species but also sustain some of the largest and most productive fish stocks in the Atlantic Ocean. However, Mauritania's fish stocks are highly endangered and declining due to increasing fishing pressure (Gascuel et al. 2007; IMROP 2014; Lemrabott et al. 2023).

Mauritania's geographical location favours a remarkably high species diversity, not least due to marine upwelling. Species from tropical, subtropical and temperate regions overlap in their distribution along the Mauritanian coast (Jager 1993; Le Loeuff and von Cosel 1998). Thus, Mauritania represents one of the northernmost distribution areas for several tropical species, while at the same time, it is one of the southernmost distribution areas for temperate species. The seagrass beds in the Baie de l'Étoile and in the Banc d'Arguin are of particular ecological importance and play a crucial role in carbon sequestration and in the promotion of biodiversity (Ly 2009; Chefaoui et al. 2021; Pottier et al. 2021). These two sensitive sites provide crucial habitats, feeding grounds, foraging and resting places for a great number of bird species (Jarry et al. 2010; Cornet et al. 2023). The third largest seagrass population in the world and the universal value as bird sanctuary led to the implementation of the Banc d'Arguin into UNESCO's Marine World Heritage Sites in 1989 (UNESCO 1989).

The shallow-water marine biodiversity of Mauritania is still understudied. We highlight not only frequently targeted fish species but also small and sometimes very rare species that are considered to represent an essential part of nodes in the marine food web. In order to use the Mauritanian fisheries resources more sustainable, it is worth considering smaller and non-commercially used species as these play an important part in marine

OPEN ACCESS

Academic editor: Arturo Angulo
Received: 17 June 2024
Accepted: 17 December 2024
Published: 3 February 2025

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food webs, especially in population and multispecies models to predict future fish stocks. Our comprehensive checklist can provide a basis for future conservation and management measures in Mauritanian coastal waters.

STUDY AREA

We focused our studies on two Mauritanian sites, the Baie de l'Étoile (BdE) and the Bellaat lagoon, which is located further south in the Baie du Lévrier (BdL) (Figure 1). Seagrass beds are present at both sites, the Baie de l'Étoile and the Bellaat Lagoon. However, the Baie de l'Étoile contains a hitherto undescribed macrophyte habitat for Mauritania, the ecologically important maerl bed formed by calcareous coralline algae. Additional hard substrate can be found at the wooden pier of the Centre de Pêche, the rocky island and several sandstone tidepools around the southern and western Baie de l'Étoile. As the Baie de l'Étoile is located in close proximity to the port city of Nouadhibou, it is subject to significant anthropogenic impact through pollution (plastic and wastewater), increased urbanization, and fishing. The Baie de l'Étoile was just recently designated as a marine protected area (30 August 2024) by the Ministère de l'Environnement et du Développement Durable. In contrast, the Bellaat lagoon is situated within the boundaries of the UNESCO World Heritage Site Banc d'Arguin National Park (UNESCO 1989). Here, artisanal fishery is allowed with unmotorised launches only. A set of submerged ridges located close to Cap Saint Anne within the PNBA's borders were also investigated as well as around the tide pools of Pelican island in front of the Bellaat lagoon entrance (Fig. 1). On several occasions, we conducted surveys of fish sold at the artisanal fish landing places in Nouadhibou (February 2023 and February 2024) and the fish market in Nouakchott (August 2022, June 2023, and January 2024). The latter fish market is by far the largest in Mauritania. Additional samples from the fishing area of the artisanal fisheries in Nouadhibou were collected during independent sampling campaigns (IMROP, Scientific campaign). Coordinates of the specific sampling areas are listed in Table 1.

METHODS

The ichthyofaunal diversity of the Mauritanian coastline has been documented through five expeditions conducted between 2021 and 2024. Various methods were deployed for fish capturing, including hand collection, beam trawling, fish trap deployment, beach seine fishing, ganchorra sampling (a Portuguese kind of beam trawl) and artisanal fish-market surveys around the cities of Nouadhibou and Nouakchott. The collected specimens were euthanised with clove oil and subsequently preserved for the scientific collections at the Mauritanian Institute of Oceanographic Research and Fisheries (IMROP) and the Senckenberg Research Institute in Frankfurt am Main. All collected vouchers got a museum specific identification number (SMF followed by the respective

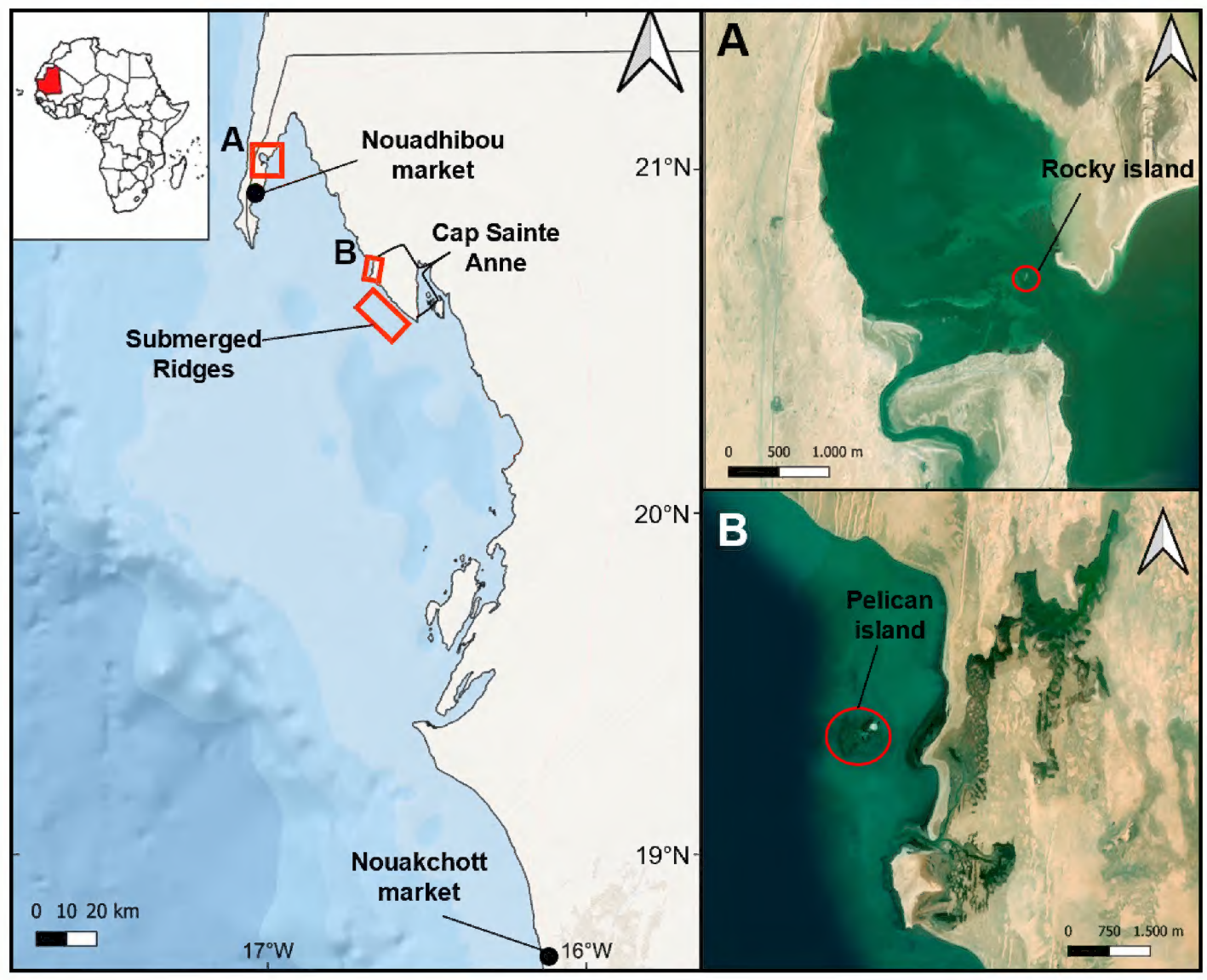

Figure 1. Geographical map of study areas along the Mauritanian coastline. Basemap from ESRI (2019) (www.esri.com). **A.** Baie de l'Étoile. **B.** Bellaat lagoon and Pelican island. Basemap from ESRI (2019), contours from GEBCO Compilation Group (2023). Satellite images in A and B from Bing Aerial Maps (https://www.bing.com).

Table 1. Approximate sampling locations in shallow-water habitats and at artisanal fish markets. Coordinates only represent the centre of each location and do not indicate the exact sampling site of each species.

Habitat	Location	Latitude (N)	Longitude (W)
Maerl bed	Baie de l'Étoile (M-BdE)	21.0209	-017.0058
Seagrass beds	Baie de l'Étoile (S-BdE)	21.0383	-017.0234
	Bellaat lagoon (S-BdL)	20.6936	-016.6749
Submerged ridge field	Baie de Lévrier (SRF)	20.6531	-016.7267
Hard substratum	Old Pier, Baie de l'Étoile (OP)	21.0207	-017.0046
	Sandstone, Baie de l'Étoile (S)	21.0198	-017.0056
	Rocky island, Baie de l'Étoile (RI)	21.0256	-017.0071
	Pelican island (PI)	20.7111	-016.6880
Artisanal fish landing sites	Nouakchott market (NKM)	18.1033	-016.0263
	Fisherman from Baie de l'Étoile (F-BdE)	21.0198	-017.0028
	Nouadhibou market (NDBM)	20.9121	-017.0425
	IMROP scientific campaign (SC)	20.9121	-017.0425

number or IMROP followed by the respective number). Specimens smaller than 10 cm were directly preserved in 70% ethanol, while larger specimens were initially preserved in formalin and gradually transferred to 70% ethanol after several weeks (Freyhof et al. 2020). Tissue samples from the pectoral and dorsal fins of the investigated individuals were taken and directly preserved in 96% ethanol for future DNA barcoding. The tissue samples were labelled with a specific tissue sample identification number (MAU followed by the respective tissue sample number) and are stored at the Senckenberg Research Institute in Frankfurt am Main. Subsequently, the

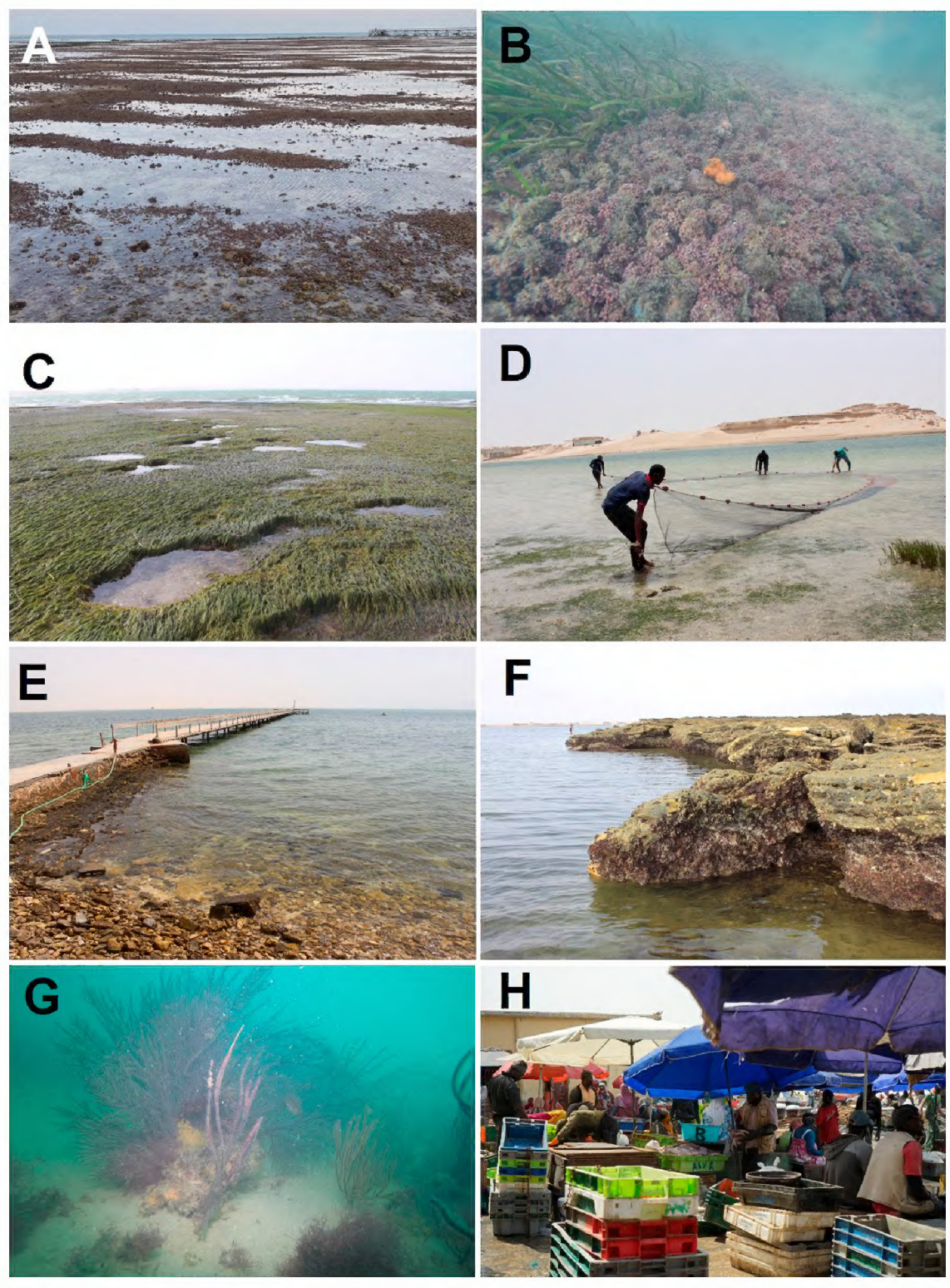

Figure 2. Overview of the investigated areas and impressions of the fieldwork. **A.** Maerl ripples in Baie de l'Étoile during low tide. **B.** Close-up photography of the submerged maerl ecosystem. **C.** *Zostera noltei* bed in the Baie de l'Étoile. **D.** Deployment of a beach seine in the Baie in Baie de l'Étoile. **E.** The old pier at the Centre de Pêche. **F.** Hard substratum of the rocky island in the Baie de l'Étoile. **G.** *Leptogorgia* forest at the submerged ridge field. **H.** Artisanal fishermen selling their catch of the day at the landing place in Nouakchott. © Kristina Hopf: H, © Friedhelm Krupp: C, D, © André Freiwald: A, E, F, © Alexander Knorrn: B, G.

collected specimens were morphologically identified on species level using ichthyological literature (Whitehead et al. 1986a, 1986b; Carpenter and De Angelis 2016a, 2016b, 2016c).

RESULTS

We identified 104 species from 53 families within 27 orders to species level at the various study areas. The majority of species were gathered from the artisanal fish markets. The fish were caught in the surrounding waters of the cities Nouadhibou and Nouakchott, and thus, can be considered part of Mauritania's local shallow-water zones. The following checklist (Table 2) represents all encountered species and lists the localities where each species was individually observed. Information about the IUCN Red List status (https://www.iucnredlist.org/) is also provided for each species.

Observed species identification

All identified species characteristics were obtained from ichthyological literature indicating the most pronounced morphological characteristics for each observed species following ichthyological literature (Carpenter and De Angelis 2016a, 2016b, 2016c; Whitehead et al. 1986a, 1986b).

Table 2. Checklist and IUCN Red List status of the marine ichthyofauna from shallow-water habitats and artisanal fish markets in Mauritania. Coordinates of the approximate locations are given in Table 1, exact coordinates are given in the specific recording of the species. Station abbreviations are M-BDE: Maerl bed in the Baie de l'Étoile, S-BDE: Seagrass bed in the Baie de l'Étoile, S-BDL: Seagrass bed in the Bellaat lagoon, OP: Old Pier, S: Sandstone, RI: Rocky Island, PI: Pelican island, NKM: Nouakchott market, F-BDE: Fishermen from the Baie de l'Étoile, NDBM: Nouadhibou market, SC: Scientific campaign of the IMROP institute. IUCN Red List categories are: DD: Data Deficient, LC: Least Concern, NT: Near Threatened, VU: Vulnerable, EN: Endangered, CR: Critically Endangered.

Species	Location	IUCN status
Pisces (*n* = 104)		
Scyliorhinidae		
Scyliorhinus canicula (Linnaeus, 1758)	SC	LC
Carcharhinidae		
Prionace glauca (Linnaeus, 1758)	NDBM	NT
Rhizoprionodon acutus (Rüppell, 1837)	OP, SRF	VU
Sphyrnidae		
Sphyrna lewini (Griffith & Smith, 1834)	NDBM	CR
Rajidae		
Raja undulata Lacepède, 1802	SRF	EN
Glaucostegidae		
Glaucostegus cemiculus (Geoffroy Saint-Hilaire, 1817)	F-BDE	CE
Polynemidae		
Galeoides decadactylus (Bloch, 1795)	RI, NDBM	NT
Pristigasteridae		
Ilisha africana (Bloch, 1795)	NKM	LC
Dorosomatidae		
Sardinella aurita Valenciennes, 1847	NKM	LC
Ethmalosa fimbriata (Bowdich, 1825)	NDBM	LC
Ariidae		
Carlarius parkii (Günther, 1864)	SRF	LC
Zeidae		
Zeus faber Linnaeus, 1758	NDBM	DD
Ophidiidae		
Brotula barbata (Bloch & Schneider, 1801)	NKM, NDBM	LC
Batrachoididae		
Halobatrachus didactylus (Bloch & Schneider, 1801)	OP, NDBM	LC
Gobiidae		
Periophthalmus barbarus (Linnaeus, 1766)	S-BDE	LC
Gobius niger Linnaeus, 1758	S-BDE, OP	LC
Gobius paganellus Linnaeus, 1758	M-BDE, PI	LC
Gobius senegambiensis Metzelaar, 1919	M-BDE, RI	LC
Pomatoschistus microps (Krøyer, 1838	S-BDE	LC
Pomatoschistus pictus (Malm, 1865)	S-BDE	LC

Species	Location	IUCN status
Mugilidae		
Chelon auratus (Risso, 1810)	S-BDE, SRF, NDBM	LC
Chelon dumerili (Steindachner, 1870)	S-BDE	DD
Chelon ramada (Risso, 1827)	S-BDL	LC
Mugil capurrii (Perugia, 1892)	S-BDE, SRF, NKM	LC
Cichlidae		
Sarotherodon melanotheron Rüppell, 1852	NKM	DD
Blenniidae		
Hypleurochilus bananensis (Poll, 1959)	OP, RI	LC
Microlipophrys velifer (Norman, 1935)	RI, S	LC
Labrisomidae		
Malacoctenus africanus Cadenat, 1951	OP	DD
Atherinidae		
Atherina presbyter Cuvier, 1829	S-BDE	LC
Hemiramphidae		
Hyporhamphus picarti (Valenciennes, 1847)	S-BDE	LC
Belonidae		
Tylosurus crocodilus (Péron & Lesueur, 1821)	NKM	LC
Coryphaenidae		
Coryphaena hippurus Linnaeus, 1758	NKM	LC
Carangidae		
Lichia amia (Linnaeus, 1758)	NKM	LC
Campogramma glaycos (Lacepède, 1801)	NKM	LC
Alectis alexandrina (Geoffroy Saint-Hilaire, 1817)	NKM	LC
Chloroscombrus chrysurus (Linnaeus, 1766)	NKM	LC
Trachurus trachurus (Linnaeus, 1758)	NDBM	VU
Seriola rivoliana Valenciennes, 1833	NKM	LC
Caranx rhonchus Geoffroy Saint-Hilaire, 1817	SRF, NDBM	LC
Sphyraenidae		
Sphyraena sphyraena (Linnaeus, 1758)	NKM	LC
Psettodidae		
Psettodes bennettii Steindachner, 1870	NKM, NDBM	DD
Citharidae		
Citharus linguatula (Linnaeus, 1758)	SC	LC
Soleidae		
Dagetichthys lusitanicus (de Brito Capello, 1868)	NDBM	DD
Microchirus wittei Chabanaud, 1950	SC	LC
Pegusa lascaris (Risso, 1810)	NKM	LC
Solea senegalensis Kaup, 1858	S-BDE, NDBM	LC
Cynoglossidae		
Cynoglossus monodi Chabanaud, 1949	NKM	NT
Syngnathidae		
Syngnathus acus Linnaeus, 1758	S-BDE	LC
Fistulariidae		
Fistularia tabacaria Linnaeus, 1758	NKM	LC
Gempylidae		
Ruvettus pretiosus Cocco, 1833	NKM	LC
Trichiuridae		
Trichiurus lepturus Linnaeus, 1758	NKM	LC
Scombridae		
Scomberomorus tritor (Cuvier, 1832)	NKM	LC
Sarda sarda (Bloch, 1793)	NKM, NDBM	LC
Centrolophidae		
Schedophilus velaini (Sauvage, 1879)	NKM, SC	LC
Stromateidae		
Stromateus fiatola Linnaeus, 1758	NKM	LC

Species	Location	IUCN status
Uranoscopidae		
Uranoscopus scaber Linnaeus, 1758	NKM	LC
Labridae		
Symphodus bailloni (Valenciennes, 1839)	S-BDE, OP, SRF	LC
Nicholsina collettei Schultz, 1968	NDBM	LC
Mullidae		
Pseudupeneus prayensis (Cuvier, 1829)	NKM	VU
Serranidae		
Cephalopholis taeniops (Valenciennes, 1828)	NKM	LC
Epinephelus aeneus (Geoffroy Saint-Hilaire, 1817)	NKM, F-BDE, NDBM	NT
Epinephelus caninus (Valenciennes, 1843)	NKM	DD
Epinephelus costae (Steindachner, 1878)	NKM	DD
Epinephelus marginatus (Lowe, 1834)	NKM	VU
Mycteroperca rubra (Bloch, 1793)	NKM	LC
Pomatomidae		
Pomatomus saltatrix (Linnaeus, 1766)	NKM	VU
Bramidae		
Brama brama (Bonnaterre, 1788)	NKM	LC
Priacanthidae		
Priacanthus arenatus Cuvier, 1829	NKM	LC
Chaetodontidae		
Chaetodon hoefleri Steindachner, 1881	SRF, NKM	LC
Malacanthidae		
Branchiostegus semifasciatus (Norman, 1931)	NKM	LC
Haemulidae		
Brachydeuterus auritus (Valenciennes, 1832)	NKM	NT
Parakuhlia macrophthalma (Osório, 1893)	NKM	DD
Pomadasys incisus (Bowdich, 1825)	SRF	LC
Pomadasys perotaei (Cuvier, 1830)	NKM	LC
Parapristipoma octolineatum (Valenciennes, 1833)	NDBM	LC
Plectorhinchus mediterraneus (Guichenot, 1850)	F-BDE	DD
Lutjanidae		
Lutjanus goreensis (Valenciennes, 1830)	NKM	DD
Scorpaenidae		
Pontinus kuhlii (Bowdich, 1825)	NDBM	DD
Scorpaena normani Cadenat, 1943	SC	LC
Moronidae		
Dicentrarchus punctatus (Bloch, 1792)	S-BDE	LC
Drepaneidae		
Drepane africana Osório, 1892	NKM	LC
Sciaenidae		
Argyrosomus regius (Asso, 1801)	F-BDE	LC
Pseudotolithus senegalensis (Valenciennes, 1833)	NKM, F-BDE	EN
Pteroscion peli (Bleeker, 1863)	NKM	LC
Sciaena umbra Linnaeus, 1758	OP, F-BDE	NT
Sparidae		
Dentex angolensis Poll & Maul, 1953	NDBM	NT
Dentex canariensis Steindachner, 1881	NDBM	LC
Dentex gibbosus (Rafinesque, 1810)	NKM	LC
Diplodus bellottii (Steindachner, 1882)	OP	LC
Diplodus cervinus (Lowe, 1838)	NDBM	LC
Diplodus puntazzo (Walbaum, 1792)	NDBM	LC
Diplodus sargus (Linnaeus, 1758)	S-BDE, F-BDE, NDBM	LC
Diplodus vulgaris (Geoffroy Saint-Hilaire, 1817)	NDBM	LC
Lithognathus mormyrus (Linnaeus, 1758)	NKM, NDBM	LC
Pagrus caeruleostictus (Valenciennes, 1830)	NKM, F-BDE	LC
Sparus aurata Linnaeus, 1758	S-BDE, NDBM	LC
Spondyliosoma cantharus (Linnaeus, 1758)	NDBM	LC

Species	Location	IUCN status
Caproidae		
Capros aper (Linnaeus, 1758)	SC	LC
Balistidae		
Balistes punctatus Gmelin, 1789	NKM	VU
Stephanolepis hispida (Linnaeus, 1766)	S-BDE, NDBM, F-BDE	LC
Tetraodontidae		
Ephippion guttifer (Bennett, 1831)	NKM, NDBM	LC
Lagocephalus guentheri Miranda Ribeiro, 1915	NKM	LC
Lagocephalus laevigatus (Linnaeus, 1766)	NKM	LC
Sphoeroides marmoratus (Lowe, 1838)	OP	LC
Sphoeroides pachygaster (Müller & Troschel, 1848)	NKM, NDBM	LC

***Scyliorhinus canicula* (Linnaeus, 1758)**

New record. MAURITANIA – Dakhlet Nouadhibou • 20.9121, -017.0425; 03.VIII.2022; M. Dia & A. Niang leg.; trawl haul (tissue sample); MAU-76.

Identification. A slender shark. Body cream-coloured ventrally and light brownish dorsally, with numerous small to large dark-brown spots, often accompanied by white spots. Anterior nasal flaps are greatly enlarged. Oronasal grooves broad and shallow (Carpenter and De Angelis 2016a).

***Prionace glauca* (Linnaeus, 1758)**

New record. MAURITANIA – Dakhlet Nouadhibou • Nouadhibou market; 20.9121, -017.0425; 23.VI.2022; M. Dia & A. Niang leg.; fish-market survey (tissue sample); MAU-3.

Identification. Body slender and fusiform, usually dark blue on dorsal side and a brighter bluish colouration on sides, ventrally brighter. Snout relatively long; eyes large. Fin tips dusky. Pectoral fin very long and elongate. Dorsal fins with no interdorsal ridge between them. Caudal peduncle with a weak keel on each side (Carpenter and De Angelis 2016a).

***Rhizoprionodon acutus* (Rüppell, 1837)**

Figure 3A

New records. MAURITANIA – Dakhlet Nouadhibou • old pier; 21.0207, -017.0046; 03.XII.2021; S. Sonnewald, S.M.M. Moctar & A. Freiwald leg.; hand collection during low tide; (no collection number available, object lost) • submerged ridges; 20.6531, -016.7267; 02.III.2023; A. Knorrn, S.M.M. Moctar, M. Sonnewald & A. Freiwald leg.; fishing rod; BdL-56; MAU-428, IMROP 18, SMF 39676.

Identification. Body slender and fusiform, dorsally greyish to greyish-brown, and ventrally white. Dorsal and anal fins with dusky or blackish edges and slightly darker than back. Anal-fin base anteriorly expanded by a very long pair of preanal ridges. Snout long and depressed, its length usually greater than width of mouth. Upper labial folds long, prominent, and horizontal on upper lip (Carpenter and De Angelis 2016a).

***Sphyrna lewini* (Griffith & Smith, 1834)**

New record. MAURITANIA – Dakhlet Nouadhibou • Nouadhibou market; 20.9121, -017.0425; VII.2022; M. Dia & A. Niang leg.; fish-market survey (tissue sample); MAU-61.

Identification. Body elongate, laterally compressed, and uniformly greyish to brownish, with tips of the pectoral fins black to dark greyish. Head hammer-shaped, with a median indentation on anterior. Free rear tip of second dorsal fin nearly reaches upper caudal-fin origin. Anal-fin base noticeably larger than that of second dorsal fin (Carpenter and De Angelis 2016a).

***Raja undulata* Lacepède, 1802**

Figure 3B

New record. MAURITANIA – Dakhlet Nouadhibou • submerged ridges; 20.6792, -016.6740; 03.III.2023; A. Knorrn, S.M.M. Moctar, M. Sonnewald & A. Freiwald leg.; hand collection at a beach near submerged ridge field; BdL-58; MAU-437, SMF 39681.

Identification. A batoid fish. Body ochre to greyish brown dorsally, with undulating dark bands outlined by a series of white spots. Ventral surface of tail greyish brown. No denticles on ventral surface, except on snout, anterior margin of disc, and tail (Carpenter and De Angelis 2016a).

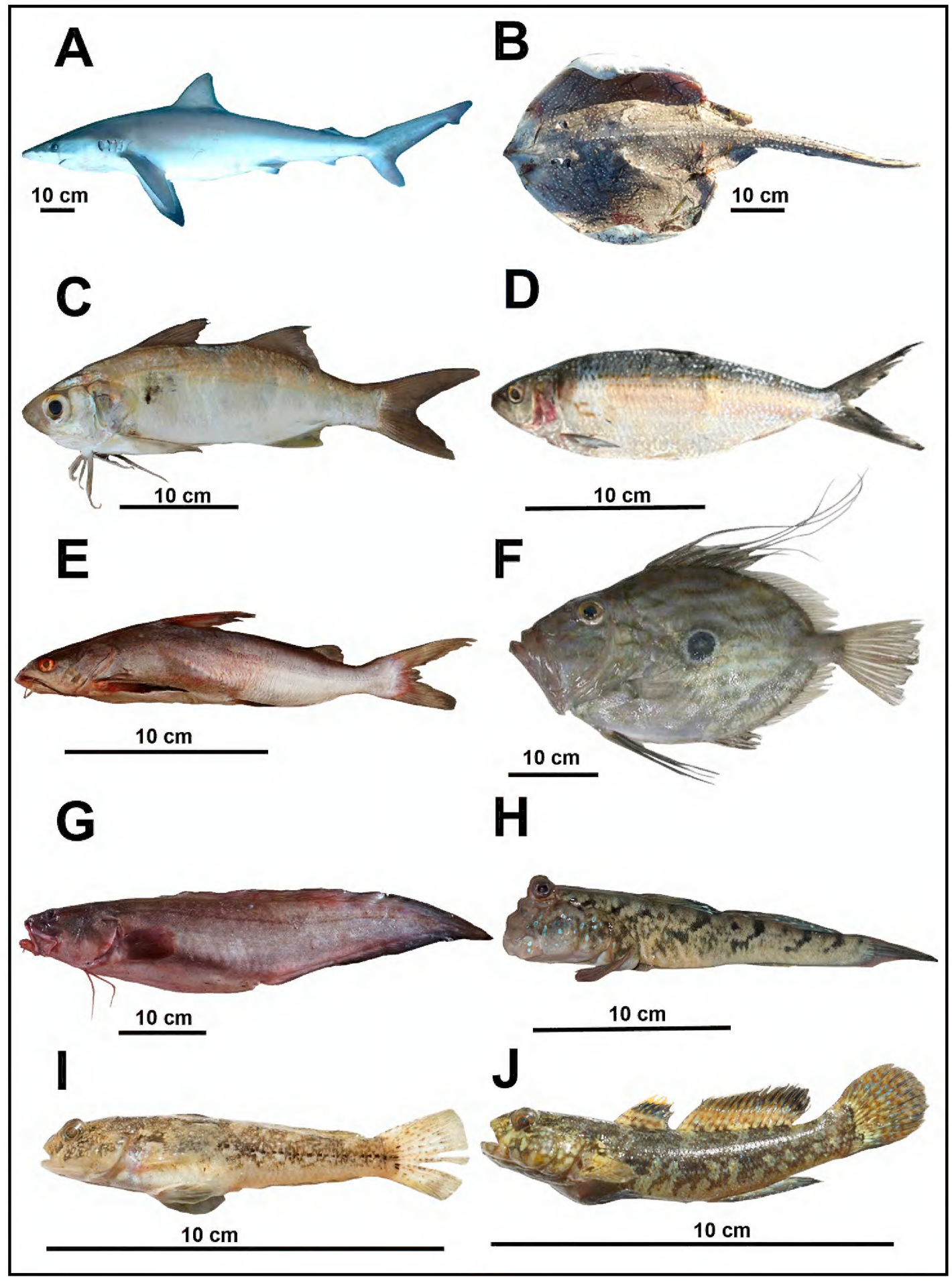

Figure 3. A. *Rhizoprionodon acutus*. **B.** *Raja undulata*. **C.** *Galeoides decadactylus*. **D.** *Sardinella aurita*. **E.** *Calarius parkii*. **F.** *Zeus faber*. **G.** *Brotula barbata*. **H.** *Periopthalmus barbarus*. **I.** *Gobius niger*. **J.** *Gobius paganellus*. © Niang Alioune: A, F, © Kristina Hopf: E, G, I, J, © Friedhelm Krupp: H, © Moritz Sonnewald: B, © Alexander Knorrn: C, D

***Glaucostegus cemiculus* (Geoffroy Saint-Hilaire, 1817)**

New record. MAURITANIA – Dakhlet Nouadhibou • fishermen from Baie de l'Étoile; 21.0198, -017.0028; 09.III.2023; A. Knorrn, S.M.M. Moctar & A. Freiwald leg.; in front of the BdE opening, gill net of local fishermen (tissue sample); BdE-159; MAU-426.

Identification. A guitarfish. Body with a typical wedge-shaped disc. Snout elongate. Back uniformly beige to light brown, except for semitransparent snout area. Ventral side white, usually with a blackish blotch on tip of snout, fading in adults. Anterior nasal flaps not extending onto internasal space. Interspace between rostral ridges narrow. Ridges join toward tip of snout (Carpenter and De Angelis 2016a).

***Galeoides decadactylus* (Bloch, 1795)**

Figure 3C

New records. MAURITANIA – Dakhlet Nouadhibou • rocky island; 21.0256, -017.0071; 27.VII.2022; A. Knorrn, F. Krupp, S.M.M. Moctar & A. Freiwald leg.; hand collection at submerged part of the rocky island; BdE-35; SMF 39828 • Nouadhibou market; 20.9121, -017.0425; 23.VI.2022; M. Dia & A. Niang leg.; fish-market survey (tissue sample); MAU-161.

Identification. Eyes large; eye diameter greater than head length. Dorsal sides of head and trunk with brown tinge, becoming silver below. A black spot present below anterior part of lateral line. Pectoral fin with 9–11 promi-

nent, elongate filaments; mostly black but base of pectoral filaments white, which become blackish on posterior tips (Whitehead et al. 1986b).

Ilisha africana (Bloch, 1795)

New record. MAURITANIA – Nouakchott Nord • Nouakchott market; 18.1033, -016.0263; 08. VII.2022; M. Dia & A. Niang leg.; fish-market survey (tissue sample); MAU-40.

Identification. Body deep, compressed, with series of sharp, serrated scutes along abdomen from gill opening to anus; dorsum grey; flanks pale grey or silver, with faint dark spot posterior to gill cover. Dorsal fin yellow, with a dusky tip. Mouth directed obliquely upward, with lower jaw projecting beyond upper with two supramaxillae and small or minute jaw teeth, with a gap at centre of upper jaw (Carpenter and De Angelis 2016b).

Sardinella aurita Valenciennes, 1847

Figure 3D

New record. MAURITANIA – Nouakchott Nord • Nouakchott market; 18.1033, -016.0263; 25.VI.2023; A. Knorrn, H. Taleb & A. Freiwald; fish-market survey (tissue sample); MAU-509.

Identification. Body elongate, subcylindrical in cross-section, and sometimes slightly compressed. Posterior margin of gill cover with a distinct black spot. No black spot at dorsal-fin origin. Pelvic fin with nine fin rays. Two fleshy outgrowths along outer margin of gill opening (Carpenter and De Angelis 2016b).

Ethmalosa fimbriata (Bowdich, 1825)

New records. MAURITANIA – Dakhlet Nouadhibou • Nouadhibou market; 20.9121, -017.0425; 14.III.2022; M. Dia & A. Niang leg.; fish-market survey (tissue sample); MAU-134.

Identification. Body fairly deep and compressed; head large. Caudal fin deep chrome-yellow, but upper and posterior margins grey. Gill cover smooth. Posterior borders of scales fringed (Carpenter and De Angelis 2016b).

Carlarius parkii (Günther, 1864)

Figure 3E

New record: MAURITANIA – Dakhlet Nouadhibou • submerged ridges (Ile d'Arguin); 20.5655, -016.4083; 05. III.2023; M. Sonnewald & A. Freiwald leg.; hand line fishing and tissue sampling; IdA-12; IMROP 17, SMF 39673, MAU-439.

Identification. Body dorsally dark brown to greenish, and ventrally light brownish to silvery. Head shield clearly visible. Palatal teeth arranged in two large patches separated by their own diameter or less (Carpenter and De Angelis 2016b).

Zeus faber Linnaeus, 1758

Figure 3F

New records. MAURITANIA – Dakhlet Nouadhibou • Nouadhibou market; 20.9121, -017.0425; 25.II.2023; A. Knorrn, M. Sonnewald & H. Taleb leg.; fish-market survey (tissue sample); BdE-138; MAU-583.

Identification. Body very deep, depth contained 1.6–2.1 times in standard length. Body golden to greenish grey with a conspicuous ocellus (black spot encircled by a narrow greyish or yellowish border) on middle of side. Caudal peduncle about as long as deep. Dorsal fin with 9–11 spines and 21–25 soft rays. Spinous portion with interspinous membrane filaments about as long as spines (Carpenter and De Angelis 2016b).

Brotula barbata (Bloch & Schneider, 1801)

Figure 3G

New records. MAURITANIA – Nouakchott Nord • Nouakchott market; 18.1033, -016.0263; 24.I.2024; A. Knorrn, K. Hopf & K. Pfennings; fish-market survey (tissue sample); NFM1-14 – Dakhlet Nouadhibou • Nouadhibou market; 20.9122, -017.0425; 21.II.2021; M. Dia & A. Niang leg.; fish-market survey (tissue sample), MAU-544

Identification. Brownish to reddish fish with one enlarged dorsal and anal fin. Six barbels present on snout and chin. Two rayed pelvic fins inserted well behind eye about level of operculum (Carpenter and De Angelis 2016b).

Halobatrachus didactylus (Bloch & Schneider, 1801)

New records. MAURITANIA – Dakhlet Nouadhibou • old pier; 21.0207, -017.0046; 18.II.2023; A. Knorrn, M. Sonnewald, S.M.M. Moctar & A. Freiwald leg.; fish trap; BdE-69-2; SMF 39662 • Nouadhibou market; 20.9121, -017.0425; 14.III.2022; M. Dia and A. Niang leg.; fish-market survey (tissue sample); MAU-017.

Identification. Head large and massive, body dorso-ventrally flattened. Head and body covered with small dark spots superimposed on a lighter network. A small axillary pore high up in pectoral axilla just below edge of opercular membrane. Second dorsal fin has brown oblique lines. Operculum and dorsal fin spines often surrounded by light areas at bases (Carpenter and De Angelis 2016b).

***Periophthalmus barbarus* (Linnaeus, 1766)**
Figure 3H

New record. MAURITANIA – Dakhlet Nouadhibou • *Spatina marina* meadow near seagrass bed in the Baie de l'Étoile; 21.0181, -017.0188; 29.VII.2022; A. Knorrn, F. Krupp, S.M.M. Moctar & A. Freiwald leg.; hand collection; BdE-31-2; SMF 39658, MAU-576.

Identification. Head and body tannish to dark brown to blue-grey with blue-white spots on sides, cheeks, snout, and operculum. Eye large and erectile. Pelvic fins divided. Both dorsal fins with a wide, bright blue distal band edged by narrow white bands. Pectoral-fin base long and muscular (Carpenter and De Angelis 2016b).

***Gobius niger* Linnaeus, 1758**
Figure 3I

New records. MAURITANIA – Dakhlet Nouadhibou • seagrass bed in the Baie de l'Étoile; 21.0120, -017.0133; 25.VII.2022; M. Dia & A. Niang leg.; beach seine; BdE-08; IMROP 31, SMF 39793, MAU-281 • Old Pier 21.0207, -017.0046; 17.II.2023; A. Knorrn, M. Sonnewald, S.M.M. Moctar & A. Freiwald leg.; fish trap; BdE-59-2; SMF 39661.

Identification. Fish with united pelvic fins (one spine and five soft rays) that form a simple disc with an anterior membrane. Nape scaled; first dorsal fin with spot in upper anterior corner, and middle rays rather elongate; scales in lateral series of 32–42 (Whitehead et al. 1986b).

***Gobius paganellus* Linnaeus, 1758**
Figure 3J

New records. MAURITANIA – Dakhlet Nouadhibou • maerl bed in the Baie de l'Étoile; 21.0199; -017.0048; 10.III.2023; A. Knorrn, M. Sonnewald, S.M.M. Moctar & A. Freiwald leg.; hand collection; BdE-171; IMROP 44, SMF 39810 • Pelican island; 20.7111, -016.6880; 03.III.2023; A. Knorrn, M. Sonnewald, S.M.M. Moctar & A. Freiwald leg.; from tidepools; hand collection; BdL-74; SMF 39811, MAU-412.

Identification. Pelvic fins united (one spine and five soft rays), forming a simple disc with an anterior membrane. First dorsal fin with a pale edge and 50–55 scales in lateral series (Whitehead et al. 1986b).

***Gobius senegambiensis* Metzelaar, 1919**
Figure 3I

New records. MAURITANIA – Dakhlet Nouadhibou • maerl bed in the Baie de l'Étoile; 21.0209, -017.0058; 17.II.2023; A. Knorrn, M. Sonnewald, S.M.M. Moctar & A. Freiwald leg.; hand collection; BdE-62; IMROP 59, MAU-555 • rocky island; 21.0256, -017.0071; 17.II.2023; A. Knorrn, M. Sonnewald, S.M.M. Moctar and A. Freiwald leg.; hand collection; BdE-65; SMF 39829, MAU-554.

Identification. Fish with united pelvic fins (one spine and five soft rays) that form a simple disc with an anterior membrane. Pelvic disc without enlarged lateral lobes. Nape scaled, first dorsal fin without upper spot, scales in lateral series 41–55 (Carpenter and De Angelis 2016c).

***Pomatoschistus microps* (Krøyer, 1838)**

New record. MAURITANIA – Dakhlet Nouadhibou • seagrass bed in the Baie de l'Étoile; 21.0273, -017.0042; 27.VII.2022; A. Knorrn, S.M.M. Moctar & A. Freiwald leg.; beach seine; BdE-16; IMROP 35, SMF 39797, MAU-294.

Identification. Pelvic fins united (one spine and five soft rays) forming a simple disc with an anterior membrane. Body cylindrical. Cheek with longitudinal lateral line row along lower margin of eye. Dorsal fins lacking series of conspicuous dark spots, except in rear of first dorsal fin, conspicuous in male (Whitehead et al. 1986b).

***Pomatoschistus pictus* (Malm, 1865)**

New record. MAURITANIA – Dakhlet Nouadhibou • seagrass bed in the Baie de l'Étoile; 21.0248, -017.0071; 17.II.2023; A. Knorrn, S.M.M. Moctar & A. Freiwald leg.; beach seine (tissue sample); BdE-63; SMF 39826.

Identification. Pelvic fins united (one spine and five soft rays) forming a simple disc with an anterior membrane. Body cylindrical. Cheek with longitudinal lateral line row along lower margin of eye. Dorsal fins with series of prominent dark spots in both sexes (Whitehead et al. 1986b).

***Chelon auratus* (Risso, 1810)**
Figure 4A

New records. MAURITANIA – Dakhlet Nouadhibou • seagrass bed in the Baie de l'Étoile; 21.0383, -017.0234; 26.VII.2022; A. Knorrn, S.M.M. Moctar & A. Freiwald leg.; beach seine; BdE-27; IMROP 27, SMF 39790 • Nouadhibou market; 20.9121, -017.0425; 21.II.2022; M. Dia and A. Niang leg.; fish-market survey (tissue sample); MAU-65 • submerged ridges; 20.6890, -016.6851; 04.III.2023; M. Sonnewald and A. Freiwald leg.; plankton net above submerged ridge field; BdL-92; SMF 39830, MAU-436.

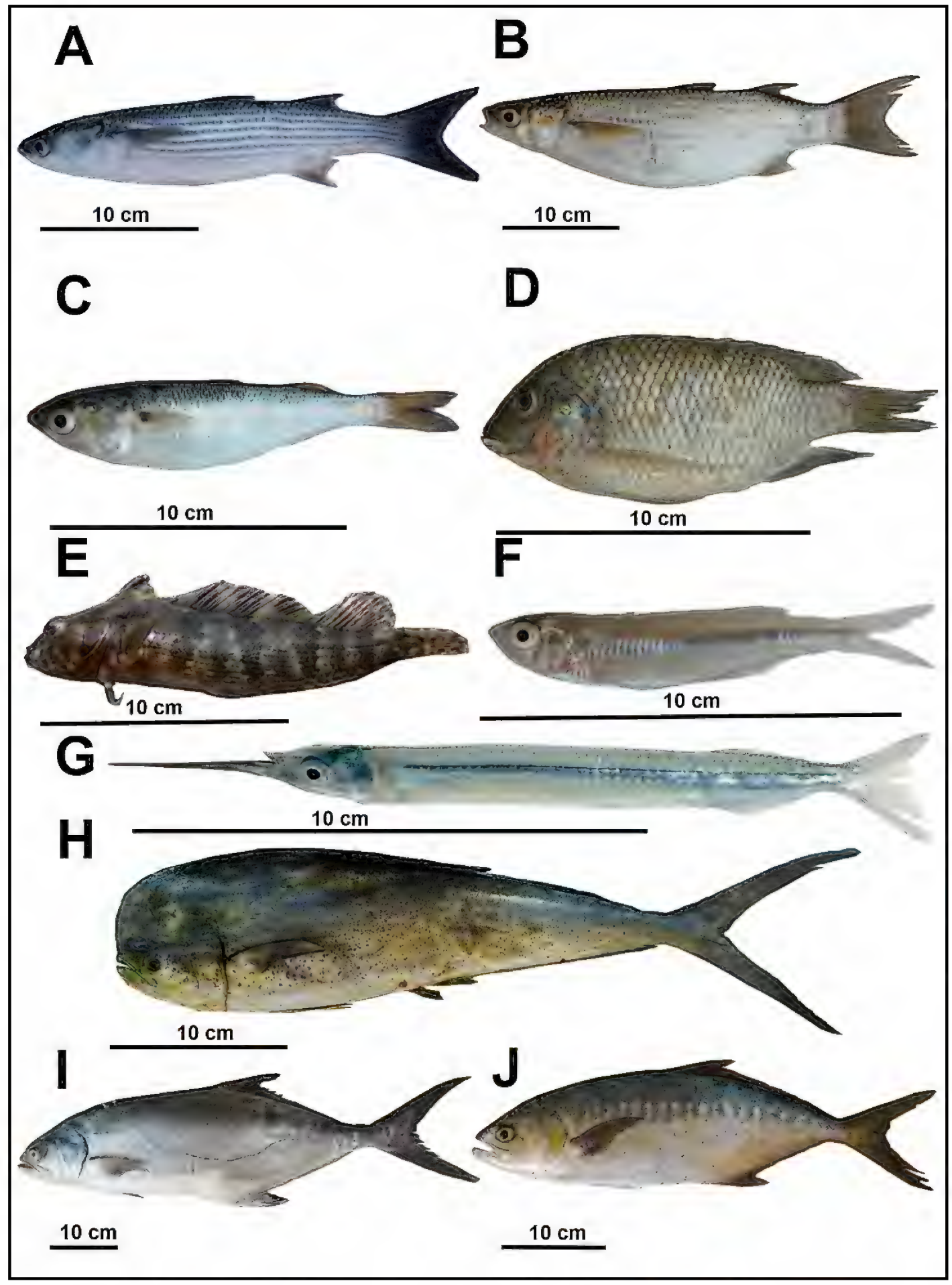

Figure 4. A. *Chelon auratus*. **B.** *Chelon ramada*. **C.** *Mugil capurrii*. **D.** *Sarotherodon melanotheron*. **E.** *Malacoctenus africanus*. **F.** *Atherina presbyter*. **G.** *Hyporhamphus picarti*. **H.** *Coryphaena hippurus*. **I.** *Lichia amia*. **J.** *Campogramma glaycos*. © Kristina Hopf: D, G, H, I, J, © Friedhelm Krupp: A, B, © Moritz Sonnewald: E, © Alexander Knorrn: F, © André Freiwald: C.

Identification. Adipose eye fold translucent, weakly developed in adults, forming a narrow ring around eye and extending anteriorly a short way onto lateral part of snout. Conspicuous goldish spot on operculum and another just behind eye. Upper lip with outer row of small to moderate-size unicuspid teeth slightly spaced from each. Lower lip without teeth (Carpenter and De Angelis 2016b).

Chelon dumerili (Steindachner, 1870)

New record. MAURITANIA – Dakhlet Nouadhibou • seagrass bed in the Baie de l'Étoile; 21.0168, -017.01844; 25.VII.2022; A. Knorrn, S.M.M. Moctar & A. Freiwald leg.; beach seine; BdE-7; MAU-278, SMF 39834.

Identification. Translucent adipose eye fold weakly developed in adults, forming a narrow ring around eye and extending anteriorly a short way onto lateral part of snout. Yellowish gold spot on dorsal part of operculum. Upper lip of juvenile and adult fish (under microscope) with outer row of close-set teeth, which have slightly flattened, blunt unicuspid tips. Teeth usually absent on lower lip; margin rarely with sparse, minute ciliiform teeth (Carpenter and De Angelis 2016b).

Chelon ramada (Risso, 1827)

Figure 4B

New record. MAURITANIA – Dakhlet Nouadhibou • seagrass bed in Bellaat lagoon; 20.6938, -016.6723; 04.III.2023; A. Knorrn, S.M.M. Moctar, M. Sonnewald & A. Freiwald leg.; hand collection during low tide; BdL-89; IMROP 61, MAU-435.

Identification. Translucent adipose eye fold weakly developed in adults, forming a narrow ring around eye and extending anteriorly a short way onto lateral part of snout. Diffuse gold spot on operculum and another just behind eye. Upper lip of juvenile and adult fish (under microscope) with outer row of very small unicuspid teeth, close-set in a fine "comb". Lower lip usually without teeth, but a single row may be present (Carpenter and De Angelis 2016b).

***Mugil capurrii* (Perugia, 1892)**

Figure 4C

New records. MAURITANIA – Dakhlet Nouadhibou • seagrass bed in the Baie de l'Étoile; 21.0383, -017.0234; 26.VII.2022; A. Knorrn, S.M.M. Moctar & A. Freiwald leg.; beach seine; BdE-3; IMROP 20, SMF 39683 • submerged ridges; 20.6531, -016.7267; 04.III.2023; A. Knorrn, S. M. Moctar, M. Sonnewald & A. Freiwald leg.; fishing line; BdL-95; SMF 39664, MAU-442 – Nouakchott Nord • Nouakchott market; 18.1033, -016.0263; 25.VI.2023; A. Knorrn, H. Taleb & A. Freiwald leg.; fish-market survey (tissue sample); MAU-505.

Identification. Translucent adipose eyefold extensive over iris. Greyish brown dorsally, flanks silvery and abdomen off-white. Fins greyish except for whitish pelvic and anal fins. Pectoral fins with dark spot at origin. Upper lip with single row of moderately well-spaced, long unicuspid teeth. Lower lip with single row of sparse unicuspid teeth (Carpenter and De Angelis 2016b).

***Sarotherodon melanotheron* Rüppell, 1852**

Figure 4D

New record. MAURITANIA – Nouakchott Nord • Nouakchott market; 18.1033, -016.0263; 24.I.2024; A. Knorrn, K. Hopf & K. Pfennings leg.; fish-market survey (tissue sample); NFM1-016.

Identification. Cichlid with a beige colouration with several intense black patches along ventral side. Caudal fin lacking those black patches. Scales on belly only slightly smaller than flank scales (Carpenter and De Angelis 2016c).

***Hypleurochilus bananensis* (Poll, 1959)**

New records. MAURITANIA – Dakhlet Nouadhibou • rocky island; 21.0254; -017.0067; 17.II.2023; A. Knorrn, M. Sonnewald, S.M.M. Moctar & A. Freiwald leg.; hand collection, BdE-65; SMF 39815, MAU-429 • old pier; 21.0207; -017.0046; 17.II.2023; A. Knorrn, M. Sonnewald, S. M. Moctar and A. Freiwald leg.; fish trap; BdE-103; IMROP 62.

Identification. Slender fish without scales. Segmented anal (15–16) and dorsal fins (13–14). Entire lateral line composed of short separate tubes, each with a pore at either end and without transverse branches. Head marbled; body brownish with five vertical dark bars (Whitehead et al. 1986b).

***Microlipophrys velifer* (Norman, 1935)**

New records. MAURITANIA – Dakhlet Nouadhibou • rocky island; 21.0254, -017.0067; 17.II.2023; A. Knorrn, M. Sonnewald, S.M.M. Moctar & A. Freiwald leg.; fish trap; BdE-64; IMROP 42, SMF 39807 • sandstone; 21.0198, -017.0056; 15.II.2023; A. Knorrn, M. Sonnewald, S.M.M. Moctar & A. Freiwald leg.; out of sandstone tubes at intertidal areas; BdE-42; IMROP 41, SMF 39806.

Identification. Body slender, without scales. Pectoral fin rays 12. Anterior part of lateral line with regularly spaced side branches. Large, dark eye-sized spot on side of head posterior to eye (Carpenter and De Angelis 2016c).

***Malacoctenus africanus* Cadenat, 1951**

Figure 4E

New record. MAURITANIA – Dakhlet Nouadhibou • old pier; 21.0207, -017.0046; 27.II.2023; A. Knorrn, M. Sonnewald, S.M.M. Moctar & A. Freiwald leg.; fish trap; BdE-142; SMF 39819.

Identification. Body elongate, with cirri or fleshy flaps on anterior nostrils, eyes, and sides of head. Maxillary bone almost completely hidden when mouth closed. Brownish hue with irregular vertical bands (Carpenter and De Angelis 2016c).

***Atherina presbyter* Cuvier, 1829**

Figure 4F

New record. MAURITANIA – Dakhlet Nouadhibou • seagrass bed in the Baie de l'Étoile; 21.0383, -017.0234; 26.VII.2022; A. Knorrn, S.M.M. Moctar & A. Freiwald leg.; beach seine; BdE-16; SMF 37974, IMROP 32.

Identification. Body elongate, with a bright stripe running whole length of side from head to tail. Anal fin always originating slightly in advance of second dorsal fin. Lateral line absent (Carpenter and De Angelis 2016b).

***Hyporhamphus picarti* (Valenciennes, 1847)**
Figure 4G

New record. MAURITANIA – Dakhlet Nouadhibou • seagrass bed in the Baie de l'Étoile; 21.0383, -017.0234; 19.II.2024; A. Niang & A. Freiwald leg.; beach seine; BdE-227; IMROP 60, SMF 39835.

Identification. Body elongate, with a greatly prolonged beak-like lower jaw. Upper jaw short, triangular, and scaly. Preorbital ridge (bony ridge under nostril) present. Dorsally greenish and ventally silvery white; three distinct, narrow, black lines along middle of back from head to dorsal fin. Fleshy tip of beak red. Caudal fin emarginate to slightly forked (Carpenter and De Angelis 2016b).

***Tylosurus crocodilus* (Péron & Lesueur, 1821)**

New record. MAURITANIA – Nouakchott Nord • Nouakchott market; 18.1033, -016.0263; 06.VII.2022; M. Dia & A. Niang leg.; fish-market survey (tissue sample); MAU-016.

Identification. Body elongate, rounded in cross section; dark bluish green dorsally and a silvery ventrally; a dark blue stripe along side. Caudal peduncle with small black lateral keel. Caudal fin deeply forked, with lower lobe much longer than upper lobe (Carpenter and De Angelis 2016b).

***Coryphaena hippurus* Linnaeus, 1758**
Figure 4H

New record. MAURITANIA – Nouakchott Nord • Nouakchott market; 18.1033, -016.0263; 22.I.2024; A. Knorrn, K. Hopf & K. Pfennings leg.; fish-market survey (tissue sample); NFM1-8.

Identification. Body elongate, compressed,the greatest body depth in adults <25% of standard length; brilliant metallic blue/green in life, fading to grey with a green tinge after death. Sides silvery, with a golden sheen, and 1 row of dark spots or golden blotches below dorsal fin and one, two, or more rows on and below lateral line. Tooth patch on tongue small, oval. Dorsal fin single, extending from above eye almost to caudal fin (Carpenter and De Angelis 2016c).

***Lichia amia* (Linnaeus, 1758)**
Figure 4I

New record. MAURITANIA – Nouakchott Nord • Nouakchott market; 18.1033, -016.0263; 25.VI.2023; A. Knorrn, H. Taleb & A. Freiwald leg.; fish-market survey (tissue sample); MAU-507.

Identification. Body elongate, moderately deep, compressed, with upper and lower profiles similar. Lateral line very irregular and sinuous, describing a convex curve above and a concave curve behind pectoral fin. Adults silvery grey dorsally, silvery white below lateral line and with grey fins. Teeth in both jaws arranged in a broad band anteriorly and becoming narrower posteriorly. Upper jaw extending beyond posterior margin of eye (Carpenter and De Angelis 2016c).

***Campogramma glaycos* (Lacepède, 1801)**
Figure 4J

New record. MAURITANIA – Nouakchott Nord • Nouakchott market; 18.1033, -016.0263; 25.VI.2023; A. Knorrn, H. Taleb & A. Freiwald leg.; fish-market survey (tissue sample); MAU-518.

Identification. Body elongate, moderately deep, slightly compressed, with upper profile slightly more convex than lower. Single row of large, widely spaced canines in each jaw. Upper jaw broad and rounded at end, extending to below posterior margin of eye or beyond. Body greenish grey dorsally, extending on sides to lateral line in a series of prominent zigzag lobes (Carpenter and De Angelis 2016c).

***Alectis alexandrina* (Geoffroy Saint-Hilaire, 1817)**
Figure 5A

New record. MAURITANIA – Nouakchott Nord • Nouakchott market; 18.1033, -016.0263; 25.VI.2023; A. Knorrn, H. Taleb & A. Freiwald leg.; fish-market survey (tissue sample); MAU-506.

Identification. Body very deep, compressed, silvery with a light metallic-bluish tinge on upper ⅓ and on head. Lateral line with a strong, moderately long anterior arch, its posterior (straight) part with 4–20 scutes. Body superficially naked; scales minute and embedded. Pelvic fin relatively long, longer than upper jaw length. Dorsal-fin rays 20–22; pelvic-fin rays 18–20 (Carpenter and De Angelis 2016c).

***Chloroscombrus chrysurus* (Linnaeus, 1766)**
Figure 5B

New record. MAURITANIA – Nouakchott Nord • Nouakchott market; 18.1033, -016.0263; 24.I.2024; A. Knorrn, K. Hopf & K. Pfennings leg.; fish-market survey (tissue sample); NFM1.

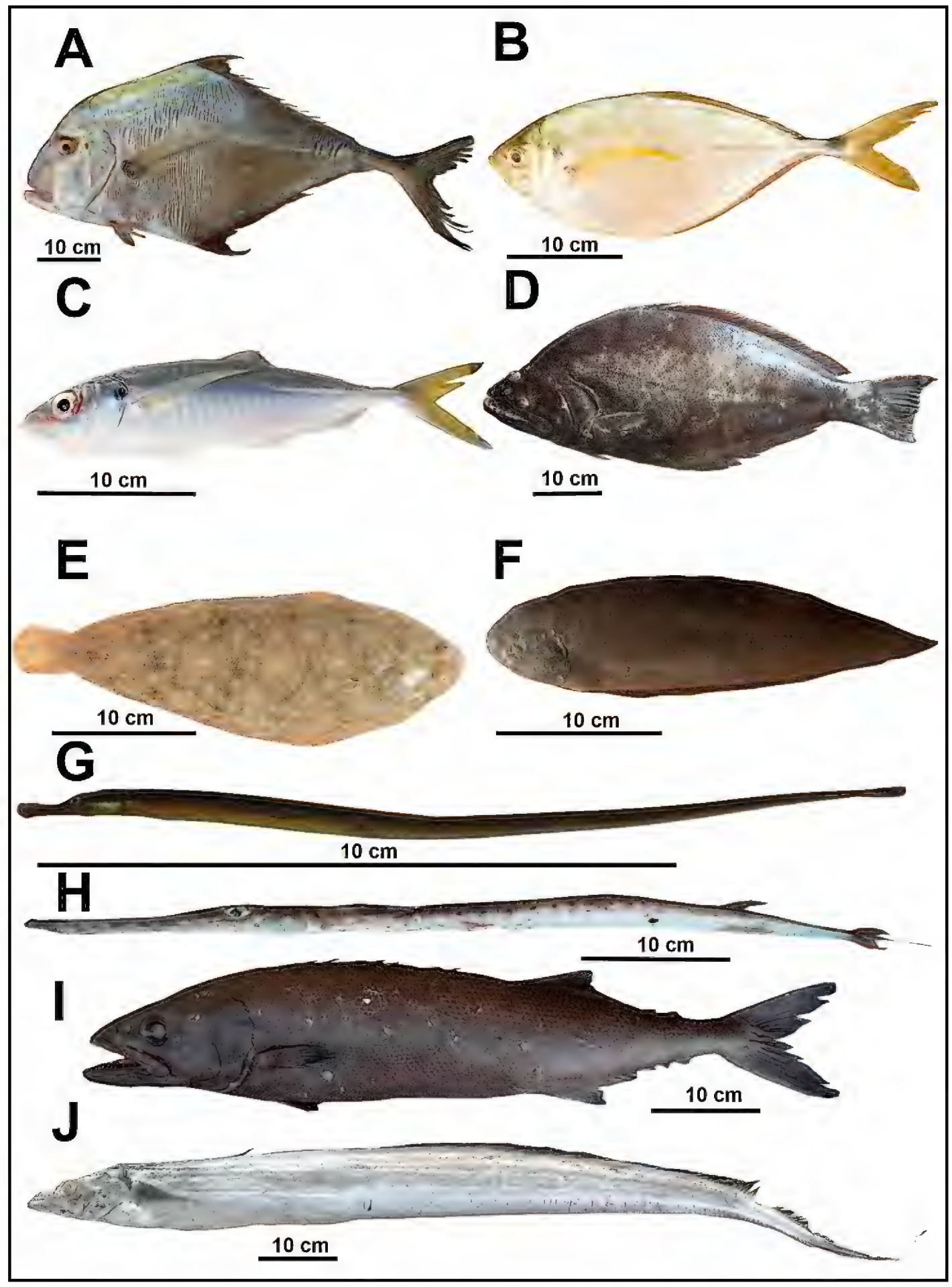

Figure 5. A. *Alectis alexandrina*. **B.** *Chloroscombrus chrysurus*. **C.** *Caranx rhonchus*. **D.** *Psettodes bennettii*. **E.** *Solea senegalensis*. **F.** *Cynoglossus monodi*. **G.** *Syngnathus acus*. **H.** *Fistularia tabacaria*. **I.** *Ruvettus pretiosus*. **J.** *Trichiurus lepturus*. © Kristina Hopf: A, B, C, E, H, I, © Moritz Sonnewald: D, F, © André Freiwald: J, © Alexander Knorrn: G.

Identification. Body ovate, with ventral profile more convex than dorsal, deep, and very compressed. Lateral line with a strong short anterior arch, posterior (straight) part with about 6–12 weak scutes, mainly over caudal peduncle. Body and head dark metallic blue to iridescent green above; sides and belly silvery; upper part of caudal peduncle with a black saddle spot (Carpenter and De Angelis 2016c).

Trachurus trachurus (Linnaeus, 1758)

New record. MAURITANIA – Dakhlet Nouadhibou • Nouadhibou market; 20.9121, -017.0425; 01.V.2022; M. Dia & A. Niang leg.; fish-market survey (tissue sample); MAU-122.

Identification. Body elongate, slightly compressed, with upper and lower profiles about equal. Dorsal accessory lateral line normally extending posteriorly at least to below first dorsal-fin spine, usually much farther posteriorly. Dorsal accessory lateral line terminates below. Dorsal-fin soft rays 19–31; scales in curved part of lateral line 33–45, total scales and scutes in lateral line 66–78 (Carpenter and De Angelis 2016c).

Seriola rivoliana Valenciennes, 1833

New record. MAURITANIA – Nouakchott Nord • Nouakchott market; 18.1033, -016.0263; 25.VI.2023; A. Knorrn, H. Taleb & A. Freiwald leg.; fish-market survey (tissue sample); MAU-517.

Identification. Body elongate, moderately shallow, and slightly compressed, with upper profile slightly more convex than lower. Body bluish grey or olivaceous on dorsal side; sides and belly silvery white or sometimes brownish or with a pinkish tinge. Usually, a dark nuchal bar often persistent in adults and extending from eye to first dorsal-fin origin. Upper jaw broad posteriorly and extending to below about anterior margin of pupil (Carpenter and De Angelis 2016c).

Caranx rhonchus Geoffroy Saint-Hilaire, 1817

Figure 5C

New records. MAURITANIA – Dakhlet Nouadhibou • Nouadhibou market; 20.9121, -017.0425; III.2021; M. Dia and A. Niang leg.; fish-market survey (tissue sample); MAU-123 • submerged ridges; 20.6704, -016.6732; 02.III.2023; A. Knorrn, S.M.M. Moctar, M. Sonnewald & A. Freiwald leg.; fishing line; BdL-56; IMROP 14, SMF 39670.

Identification. Body elongate and slightly compressed with upper and lower profiles about equal and well-developed adipose eyelid. Margin of operculum near upper edge with black spot. Lobe of second dorsal fin with black blotch and narrow pale border distally (Carpenter and De Angelis 2016c).

Sphyraena sphyraena (Linnaeus, 1758)

New record. MAURITANIA – Nouakchott Nord • Nouakchott market; 18.1033, -016.0263; 06.VII.2022; M. Dia & A. Niang leg.; fish-market survey (tissue sample); MAU-39.

Identification. Body elongate and cylindrical. Lower jaw with fleshy knob. Pectoral fins not reaching to level of origin of ventral fins. Lateral-line scales smaller; sides of body without irregular black blotches. Preopercle entirely scaled and a single spine on operculum. Second and third spines of first dorsal fin about equal to longest ray of second dorsal fin (Carpenter and De Angelis 2016c).

Psettodes bennettii Steindachner, 1870

Figure 5D

New records. MAURITANIA – Dakhlet Nouadhibou • Nouadhibou market; 20.9121, -017.0425; 03.III.2022; M. Dia & A. Niang leg.; fish-market survey (tissue sample); MAU-81 – Nouakchott Nord • Nouakchott market; 18.1033, -016.0263; 25.VI.2023; A. Knorrn, H. Taleb & A. Freiwald leg.; fish-market survey (tissue sample); MAU-586.

Identification. Body oval, flat, but thicker than in most other flatfishes. Ocular side uniformly brownish, with irregular spots and blotches. Jaws large, with strong canine teeth. Preopercular margin easily seen, not hidden by skin and scales. Dorsal-fin origin well posterior to upper eye. Caudal fin without large spots. Caudal peduncle with 34–43 scales (Carpenter and De Angelis 2016c).

Citharus linguatula (Linnaeus, 1758)

New record. MAURITANIA – Dakhlet Nouadhibou • 20.9121, -017.0425; 03.VIII.2022; M. Dia & A. Niang leg.; trawl haul (tissue sample); MAU-12.

Identification. Body elliptical, moderately compressed. Conspicuous pair of black spots on dorsal and ventral body margins at and slightly posterior to posterior ends of dorsal and anal fins. Mouth large, terminal, with lower jaw protruding; jaws large. Dorsal and anal fins without spines. Dorsal-fin origin on blind side of head anterior to vertical through anterior margin of upper eye (Carpenter and De Angelis 2016c).

Dagetichthys lusitanicus (de Brito Capello, 1868)

New record. MAURITANIA – Dakhlet Nouadhibou • Nouadhibou market; 20.9121, -017.0425; 01.III.2022; M. Dia & A. Niang leg.; fish-market survey (tissue sample); MAU-95.

Identifications. Body elongate, laterally compressed. Anterior snout with bony process. Eyes separated by narrow, scaly, interorbital space. Blind-side anterior nostril not enlarged. Middle of excrescence delimited by a non-scaly groove. Eye side greyish to brownish, with blackish blotches tending to form longitudinal series with largest blotches along lateral line. Blind side nostril tubular (Carpenter and De Angelis 2016c).

Microchirus wittei Chabanaud, 1950

New record. MAURITANIA – Dakhlet Nouadhibou • 20.9121, -017.0425; 03.VIII.2022; M. Dia & A. Niang leg.; trawl haul (tissue sample); MAU-49.

Identification. Body oval, elongate, and laterally compressed. Ocular side dark brown, with five dark-brown cross-bands on body and vertical fins. Pectoral fin dark brown. Blind side whitish, with dorsal and anal fins coloured as on ocular side (Carpenter and De Angelis 2016c).

Pegusa lascaris (Risso, 1810)

New record. MAURITANIA – Nouakchott Nord • Nouakchott market; 18.1033, -016.0263; 25.VI.2023; A. Knorrn, H. Taleb & A. Freiwald leg.; fish-market survey (tissue sample); MAU-587.

Identification. Body oval, elongate, laterally compressed. Blind-side anterior nostril enlarged and rosette-shaped. Eye side uniformly yellowish to brownish coloured with several dark and whitish spots. Pectoral fin on eye side with a distinct black patch surrounded by yellow and white areas (Carpenter and De Angelis 2016c).

***Solea senegalensis* Kaup, 1858**
Figure 5E

New records. MAURITANIA – Dakhlet Nouadhibou • seagrass bed in the Baie de l'Étoile; 21.0383, -017.0234; 19.II.2024; A. Niang & A. Freiwald leg.; beach seine; BdE-8; IMROP 23, SMF39686 • Nouadhibou market; 20.9121, -017.0425; 01.III.2022; M. Dia and A. Niang leg.; fish-market survey (tissue sample); MAU-87.

Identification. Body oval, elongate, laterally compressed. Pectoral fins equally well developed. Membrane between rays of ocular-side pectoral fin darker than body colour. Ocular side greyish to reddish brown in life, with small blue spots tending to disappear after death. Pectoral fin of eyed side with black membrane and greyish rays; caudal fin uniformly coloured (Carpenter and De Angelis 2016c).

***Cynoglossus monodi* Chabanaud, 1949**
Figure 5F

New record. MAURITANIA – Nouakchott Nord • Nouakchott market; 18.1033, -016.0263; 25.VI.2023; A. Knorrn, H. Taleb & A. Freiwald leg.; fish-market survey (tissue sample); MAU-515.

Identification: Body compressed and elongate, with two lateral lines on ocular side. Angle of mouth extending just posterior to vertical through posterior margin of lower eye, nearer to branchial opening than to tip of snout (Carpenter and De Angelis 2016c).

***Syngnathus acus* Linnaeus, 1758**
Figure 5G

New record. MAURITANIA – Dakhlet Nouadhibou • seagrass bed in the Baie de l'Étoile; 21.0383, -017.0234; 25.VII.2022; A. Niang & A. Freiwald leg.; beach seine; BdE-9; IMROP 25, SMF 39788, MAU-286.

Identification. Body extremely elongate and encased in bony armour arranged into series of rings. Mouth small, toothless, placed at end of tubular snout. Median post-orbital part of head clearly elevated. Dorsum and side brownish to greenish, usually with dark bars on trunk and tail (Whitehead et al. 1986a).

***Fistularia tabacaria* Linnaeus, 1758**
Figure 5H

New record. MAURITANIA – Nouakchott Nord • Nouakchott market; 18.1033, -016.0263; 22.I.2024; A. Knorrn, K. Hopf & K. Pfennings leg.; fish-market survey (tissue sample); NFM1-12.

Identifications. Body elongate and depressed. Mouth at end of a long, tubular snout, hexagonal in cross section. No elongate bony plates along midline of back. Posterior lateral-line ossifications without a spine (may be rough to the touch). Back, sides, and snout with several rows of blue spots (Carpenter and De Angelis 2016b).

***Ruvettus pretiosus* Cocco, 1833**
Figure 5I

New record. MAURITANIA – Nouakchott Nord • Nouakchott market; 18.1033, -016.0263; 22.I.2024; A. Knorrn, K. Hopf & K. Pfennings leg.; fish-market survey (tissue sample); NFM1-7.

Identification. Body semifusiform, slightly compressed, and uniformly brown to dark brown, with tips of pectoral and pelvic fins black. Skin very rough with medium-sized scales interspersed with spinous bony tubercles. Belly keeled by bony scales between pelvic fins and anus (Carpenter and De Angelis 2016c).

***Trichiurus lepturus* Linnaeus, 1758**
Figure 5J

New record. MAURITANIA – Nouakchott Nord • Nouakchott market; 18.1033, -016.0263; 25.VI.2023; A. Knorrn, H. Taleb & A. Freiwald leg.; fish-market survey (tissue sample); MAU-513.

Identification. Body elongate, strongly compressed, ribbon-like, tapering to a point, steel-blue with silvery reflection; pectoral fin semitransparent; other fins sometimes tinged with pale yellow. Pelvic fins absent (Carpenter and De Angelis 2016c).

***Scomberomorus tritor* (Cuvier, 1832)**
Figure 6A

New record. MAURITANIA – Nouakchott Nord • Nouakchott market; 18.1033, -016.0263; 25.VI.2023; A. Knorrn, H. Taleb & A. Freiwald leg.; fish-market survey (tissue sample); MAU-588.

Identification. Body elongate, strongly compressed, bluish green on back, and silvery with about three rows of vertically elongate spots on sides. Lateral line straight or gradually curving down toward caudal peduncle (Carpenter and De Angelis 2016c).

***Sarda sarda* (Bloch, 1793)**

Figure 6B

New records. MAURITANIA – Dakhlet Nouadhibou • Nouadhibou market; 20.9121, -017.0425; 23.VI.2022; M. Dia & A. Niang leg.; fish-market survey (tissue sample); MAU-1 – Nouakchott Nord • Nouakchott market; 18.1033, -016.0263; 25.VI.2023; A. Knorrn, H. Taleb & A. Freiwald leg.; fish-market survey (tissue sample); Mau-589.

Identification. Body relatively narrow. Dorsal fins close together. First spiny dorsal fin very long, with 20–23 spines and straight or only slightly concave in outline. Dorsal and upper lateral side steel-blue, with 5–11 dark, slightly oblique stripes running forward and downward. Lower ventral sides and belly silvery (Carpenter and De Angelis 2016c).

***Schedophilus velaini* (Sauvage, 1879)**

Figure 6C

New records. MAURITANIA – Dakhlet Nouadhibou • 20.9121, -017.0425; 03.VIII.2022; M. Dia & A. Niang leg.; trawl haul (tissue sample); MAU-148 – Nouakchott Nord • Nouakchott market; 18.1033, -016.0263; 22.I.2024; A. Knorrn, K. Hopf & K. Pfennings leg.; fish-market survey (tissue sample); NFM1-1.

Identification. Body generally uniformly dark green to grey, or brownish with an indistinct

vertical, or more usually horizontal, pattern of darker irregular stripes. Eyes often golden. dorsal fin single, continuous, and with 23–25 soft rays (Carpenter and De Angelis 2016c).

***Stromateus fiatola* Linnaeus, 1758**

New record. MAURITANIA – Nouakchott Nord • Nouakchott market; 18.1033, -016.0263; 22.I.2024; A. Knorrn, K. Hopf & K. Pfennings leg.; fish-market survey (tissue sample); NFM1-15.

Identification. Body blue to brownish, with a silvery cast and numerous dark spots on dorsal side. Head deep and compressed. Snout short, blunt, and with a small mouth. Dorsal and anal fins long and caudal fin deeply forked (Carpenter and De Angelis 2016c).

***Uranoscopus scaber* Linnaeus, 1758**

Figure 6D

New record. MAURITANIA – Nouakchott Nord • Nouakchott market; 18.1033, -016.0263; 24.I.2024; A. Knorrn, K. Hopf & K. Pfennings leg.; fish-market survey (tissue sample); NFM2-18.

Identification. Body robust anteriorly and compressed posteriorly. Origin of first dorsal fin not surrounded by a large, distinct white patch. Venomous cleithral spine short, <25% of head length. Mouth tentacle long, slender, and grey in colour (Carpenter and De Angelis 2016c).

***Symphodus bailloni* (Valenciennes, 1839)**

Figure 6E

New records. MAURITANIA – Dakhlet Nouadhibou • seagrass bed in the Baie de l'Étoile; 21.0383, -017.0234; 27.VII.2022; F. Krupp & S.M.M. Moctar, leg.; beach seine; BdE-9; IMROP 8, SMF 39660, MAU-289, MAU-290 • old pier; 21.0207, -017.0046; 17.II.2023; A. Knorrn, M. Sonnewald, S.M.M. Moctar & A. Freiwald leg.; fish trap; BdE-59-2; IMROP 11, SMF 39663, MAU-407 • submerged ridges; 20.6531, -016.7267; 04.III.2023; A. Knorrn, S.M.M. Moctar, M. Sonnewald & A. Freiwald leg.; beam trawl; BdL-88; SMF 39833, MAU-409.

Identification. Body moderately deep and snout short, with large lips. Head length equal to or shorter than body depth and preopercular edge serrated. Dorsal fin continuous with 14–15 spines and 9–11 soft rays. Both sexes with a dark spot on caudal peduncle and another brown-black or dark-blue spot on beginning of soft part of dorsal fin; base of pectoral fin with a blue arc. Middle and upper sides with three longitudinal dark-brown stripes (Carpenter and De Angelis 2016c).

***Nicholsina collettei* Schultz, 1968**

New record. MAURITANIA – Dakhlet Nouadhibou • Nouadhibou market; 20.9121, -017.0425; 23.VI.2022; M. Dia & A. Niang leg.; fish-market survey (tissue sample); MAU-63.

Identification. Body elongate, mottled olive green on dorsal side. Scales on sides with bluish-white centres and reddish edges. Head below level of mouth yellowish. Two narrow, diagonal, red-orange bands on cheek. Edge of anterior nostril with a small dermal cirrus. Teeth only basally fused and not fully coalesced to form dental plates (Carpenter and De Angelis 2016c).

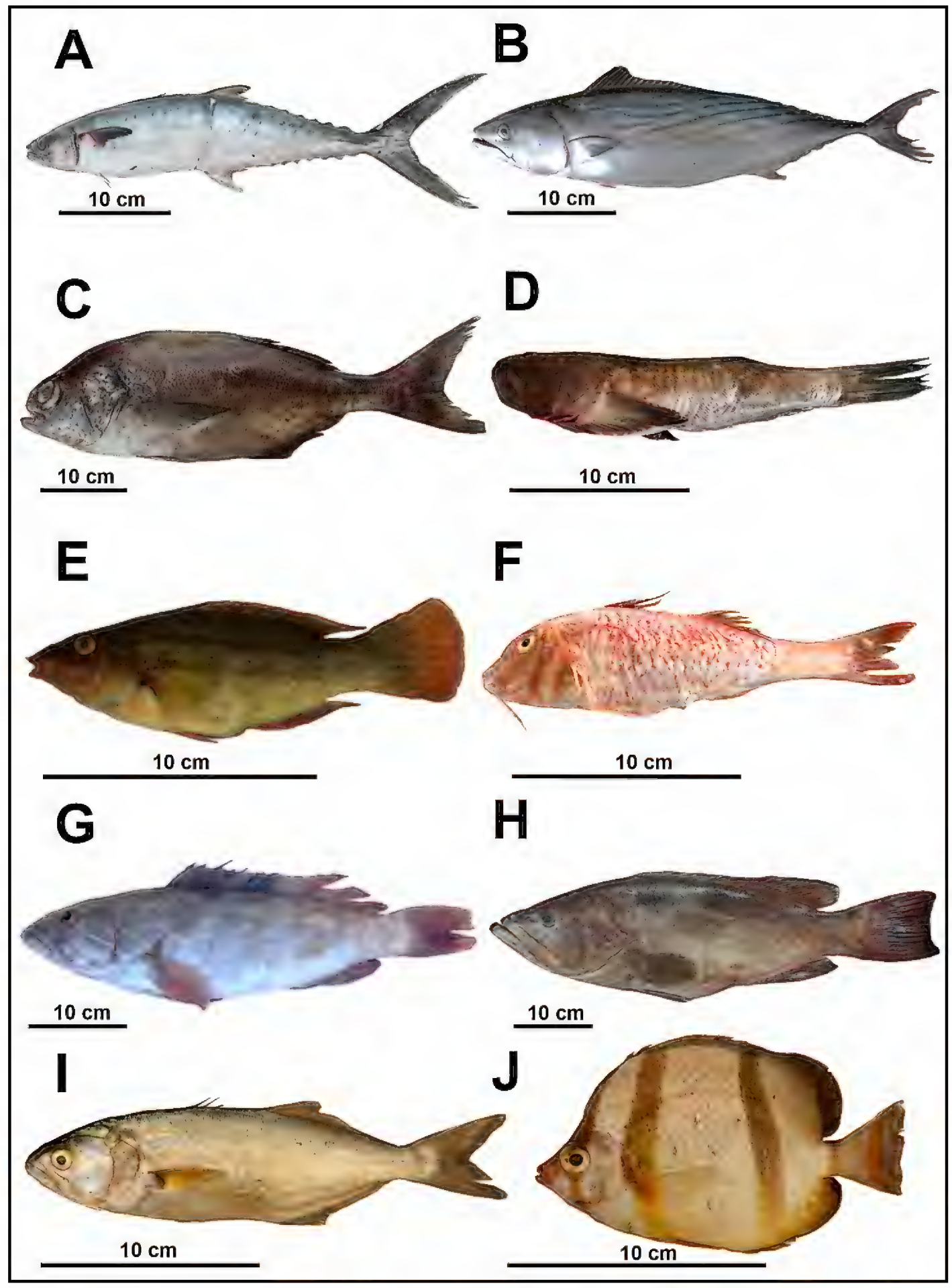

Figure 6. A. *Scomberomorus tritor*. **B.** *Sarda sarda*. **C.** *Schedophilus velaini*. **D.** *Uranoscopus scaber*. **E.** *Symphodus baillioni*. **F.** *Pseudupenaeus prayensis*. **G.** *Epinephelus aeneus*. **H.** *Epinephelus costae*. **I.** *Pomatomus saltatrix*. **J.** *Chaetodon hoefleri*. © Kristina Hopf: A, D, I, J, © Moritz Sonnewald: G, F, © André Freiwald: B, C, H, © Friedhelm Krupp: E.

***Pseudupeneus prayensis* (Cuvier, 1829)**
Figure 6F

New record. MAURITANIA – Nouakchott Nord • Nouakchott market; 18.1033, -016.0263; 24.II.2023; A. Knorrn H. Taleb & M. Sonnewald leg.; fish-market survey (tissue sample); MAU-514.

Identification. Body moderately elongate, slightly compressed, and pinkish red, with 3–4 longitudinal dark-red to brownish-yellow lines. Snout somewhat pointed. Head profile gently convex. One spine on posterior opercular margin (Carpenter and De Angelis 2016c).

***Cephalopholis taeniops* (Valenciennes, 1828)**

New record. MAURITANIA – Nouakchott Nord • Nouakchott market; 18.1033, -016.0263; 6.VI.2022; M. Dia & A. Niang leg.; fish-market survey (tissue sample); MAU-109.

Identification. Body oblong, compressed, and depth less than head length; reddish orange. Head, body, and median fins covered with distinct, small, blue spots with dark edges (Carpenter and De Angelis 2016c).

***Epinephelus aeneus* (Geoffroy Saint-Hilaire, 1817)**
Figure 6G

New records. MAURITANIA – Dakhlet Nouadhibou • Nouadhibou market; 20.9121, -017.0425; 24.II.2023; A. Knorrn, M. Sonnewald & H. Talebleg.; fish-market survey (tissue sample); MAU-590 • fishermen from Baie de

l'Étoile; 21.0198, -017.0028; 09.III.2023; A. Knorrn, S.M.M. Moctar & A. Freiwald leg.; in front of the BdE opening; gill net of local fishermen (tissue sample); BdE-135; MAU-422 – Nouakchott Nord • Nouakchott market; 18.1033, -016.0263; 25.VI.2023; A. Knorrn, H. Taleb & A. Freiwald leg.; fish-market survey (tissue sample); MAU-511.

Identification. Body moderately elongate, slightly compressed, and pinkish red with 2–3 prominent oblique white stripes on head behind eye. Snout somewhat pointed, and head profile gently convex. One spine on posterior opercle margin. Dorsal fin with 11 spines and 14–16 rays. Third and fourth spines longest, and interspinous membranes slightly incised. Anal fin with three spines and eight rays. Caudal fin rounded (Carpenter and De Angelis 2016c).

***Epinephelus caninus* (Valenciennes, 1843)**

New record. MAURITANIA – Nouakchott Nord • Nouakchott market; 18.1033, -016.0263; 25.VI.2023; A. Knorrn, H. Taleb & A. Freiwald leg.; fish-market survey (tissue sample); MAU-591.

Identification. Body depth less than head length and uniformly dark-reddish brown to greyish violet, without prominent markings; belly slightly paler; head with two oblique dark stripes running downward. Dorsal fin with 11 spines and 13–15 rays, with third and fourth spines longest. Interspinous membranes deeply incised. Anal fin with three spines and eight rays. Caudal fin truncate or emarginate (Carpenter and De Angelis 2016c).

***Epinephelus costae* (Steindachner, 1878)**

Figure 6H

New record. MAURITANIA - Nouakchott market; 18.1033, -016.0263; 24.I.2024; A. Knorrn, K. Hopf & K. Pfennings leg.; fish-market survey (tissue sample); NFM1-9.

Identification. Body depth less than head length, contained 2.8–3.4 times in standard length. Body yellowish brown to sepia-brown; large specimens often with diffuse golden blotch on sides (disappears quickly after death). Preopercle angle forming a rounded lobe, with indentation immediately above lobe; middle and lower opercular spines flat but distinct (Carpenter and De Angelis 2016c).

***Epinephelus marginatus* (Lowe, 1834)**

New record. MAURITANIA – Nouakchott Nord • Nouakchott market; 18.1033, -016.0263; 25.VI.2023; A. Knorrn, H. Taleb & A. Freiwald leg.; fish-market survey (tissue sample); MAU-592.

Identification. Body depth less than head length. Head and body dark reddish brown or greyish dorsally and usually yellowish gold ventrally; irregular white, pale-greenish-yellow, or silvery-grey spots and blotches usually on body and head and mostly arranged in vertical series. Dorsal fin with 11 spines and 14–16 rays, with third or fourth spines longest and about equal to longest dorsal-fin ray. Interspinous dorsal-fin membranes distinctly incised. Anal fin with three spines and eight rays. Caudal fin rounded (Carpenter and De Angelis 2016c).

***Mycteroperca rubra* (Bloch, 1793)**

New record. MAURITANIA – Nouakchott Nord • Nouakchott market; 18.1033, -016.0263; 28.III.2022; M. Dia & A. Niang leg.; fish-market survey (tissue sample); MAU-149.

Identification. Body depth less than head length. Body generally uniform reddish brown, sometimes mottled with irregular, blackish or pale-grey spots and with a black streak above maxilla (Carpenter and De Angelis 2016c).

***Pomatomus saltatrix* (Linnaeus, 1766)**

Figure 6I

New record. MAURITANIA – Nouakchott Nord • Nouakchott market; 18.1033, -016.0263; 24.I.2024; A. Knorrn, K. Hopf & K. Pfennings leg.; fish-market survey (tissue sample); NKM2-29.

Identification. Body compressed, head large. Two dorsal fins: first short and low, with 7–8 feeble spines connected by membranes; second long, with one spine and 23–28 soft rays. Scales small and cover head, body, and bases of vertical fins. Lateral line almost straight. Back greenish blue; sides and belly silvery. Dorsal and anal fins pale green, tinged with yellow (Carpenter and De Angelis 2016c).

***Brama brama* (Bonnaterre, 1788)**

New record. MAURITANIA – Nouakchott Nord • Nouakchott market; 18.1033, -016.0263; 24.I.2024; A. Knorrn, K. Hopf & K. Pfennings leg.; fish-market survey (tissue sample); NFM1-13.

Identification. Body oval, with dorsal profile of head between eyes strongly arched and rounded. Dorsal fin originating over pectoral fin base. No keel on caudal peduncle. Prominent axillary scale at base of pelvic fin. Body silvery-blackish, with lighter paired fins and trailing edge of caudal fin (Carpenter and De Angelis 2016c).

***Priacanthus arenatus* Cuvier, 1829**

New record. MAURITANIA – Nouakchott Nord • Nouakchott market; 18.1033, -016.0263; 06.VII.2022; M. Dia & A. Niang leg.; fish-market survey (tissue sample); MAU-156.

Identifications. Body reddish, deeply ovate, and laterally compressed. Anterior profile of head more asymmetrical; extremity of lower jaw usually above level of midline of body. Posterior portion of preopercle with scales. Base of pelvic fins usually with well-developed black area (Carpenter and De Angelis 2016c).

***Chaetodon hoefleri* Steindachner, 1881**

Figure 6J

New records. MAURITANIA – Dakhlet Nouadhibou • submerged ridges; 20.6531, -016.7267; 04.II.2024; A. Knorrn, S. M. Moctar, K. Hopf, K. Pfennings & A. Freiwald obs.; video lander – Nouakchott Nord • Nouakchott market; 18.1033, -016.0263; 24.I.2024; A. Knorrn, K. Hopf & K. Pfennings leg.; fish-market survey; NFM2-27; SMF 39821.

Identification. Body deep and compressed, with a short snout; body with four vertical, dark bars: first and fourth black, the second and third brownish. First bar extending downward from nape to eye, continuing downward to lower border of operculum. Third bar with a black spot at junction with dorsal fin. Fourth bar on caudal peduncle. Pelvic fin yellow (Carpenter and De Angelis 2016c).

***Branchiostegus semifasciatus* (Norman, 1931)**

Figure 7A

New record. MAURITANIA – Nouakchott Nord • Nouakchott market; 18.1033, -016.0263; 28.III.2022; M. Dia & A. Niang leg.; fish-market survey (tissue sample); Mau-135.

Identification. Body quadriform. Snout blunt, with jaws extending to well under anterior margin of relatively large eye. Head with elevated predorsal ridge (raised seam in front of dorsal fin). Preoperculum with fine serrae on upper limb. One single blunt opercular spine or tab. Sides of body golden yellow and with 16–20 dark, grey-violet tapering vertical bars from anterior of dorsal fin base to posterior of dorsal-fin base. Large, dark area between axil of pectoral fin and dorsal margin of operculum (Carpenter and De Angelis 2016c).

***Brachydeuterus auritus* (Valenciennes, 1832)**

Figure 7B

New record. MAURITANIA – Nouakchott Nord • Nouakchott market; 18.1033, -016.0263; 24.I.2024; A. Knorrn, K. Hopf & K. Pfennings leg.; fish-market survey (tissue sample); NFM2-30.

Identification. Body oblong and compressed, with bluish back and sometimes with small, dark spots on dorsal fin near base. Snout shorter than eye diameter. Chin with a pair of small pores near lips and another pair of very close pores at symphysis of lower jaw.

***Parakuhlia macrophthalma* (Osório, 1893)**

New record. MAURITANIA – Nouakchott Nord • Nouakchott market; 18.1033, -016.0263; 08.VII.2022; M. Dia & A. Niang leg.; fish-market survey (tissue sample); Mau-38.

Identification. Body ovate, moderately deep, laterally compressed, mostly silvery, slightly darker on dorsal surface. All fins, base of dorsal and anal fins, and caudal peduncle dark yellow. Dorsal profile of head relatively steep, slightly concave over eye. A single dorsal fin, deeply notched between spinous and soft-rayed portions, with 11 spines in anterior section and one spine and 15–16 soft rays posteriorly (Carpenter and De Angelis 2016c).

***Pomadasys incisus* (Bowdich, 1825)**

New record. MAURITANIA – Dakhlet Nouadhibou • submerged ridges; 20.6531, -016.7267; 04.III.2023; A. Knorrn, S.M.M. Moctar, M. Sonnewald & A. Freiwald leg.; fishing line; BdL-56; SMF 39679.

Identification. Body oblong and compressed, more convex dorsally, and silvery-grey; posterior edge of operculum with dark blotch and without spots or stripes. Pectoral, pelvic, and anal fins yellowish; dorsal and caudal fin yellowish to blackish. One pair of small chin pores at symphysis of low lip and a single pit opening to a pair of pores at symphysis of lower jaw (Carpenter and De Angelis 2016c).

***Pomadasys perotaei* (Cuvier, 1830)**

Figure 7C

New record. MAURITANIA – Nouakchott Nord • Nouakchott market; 18.1033, -016.0263; 25.VI.2023; A. Knorrn, H. Taleb & A. Freiwald leg.; fish-market survey (tissue sample); MAU-519.

Identifications. Body oblong and compressed; back silvery grey, with a bluish cast; belly silvery; back and side with irregularly spread light-brown spots. Upper back anterior to line from origin of dorsal fin to origin of lateral line typically with distinct spots; spots present in scale rows above, below, and on anterior scales of lateral line.

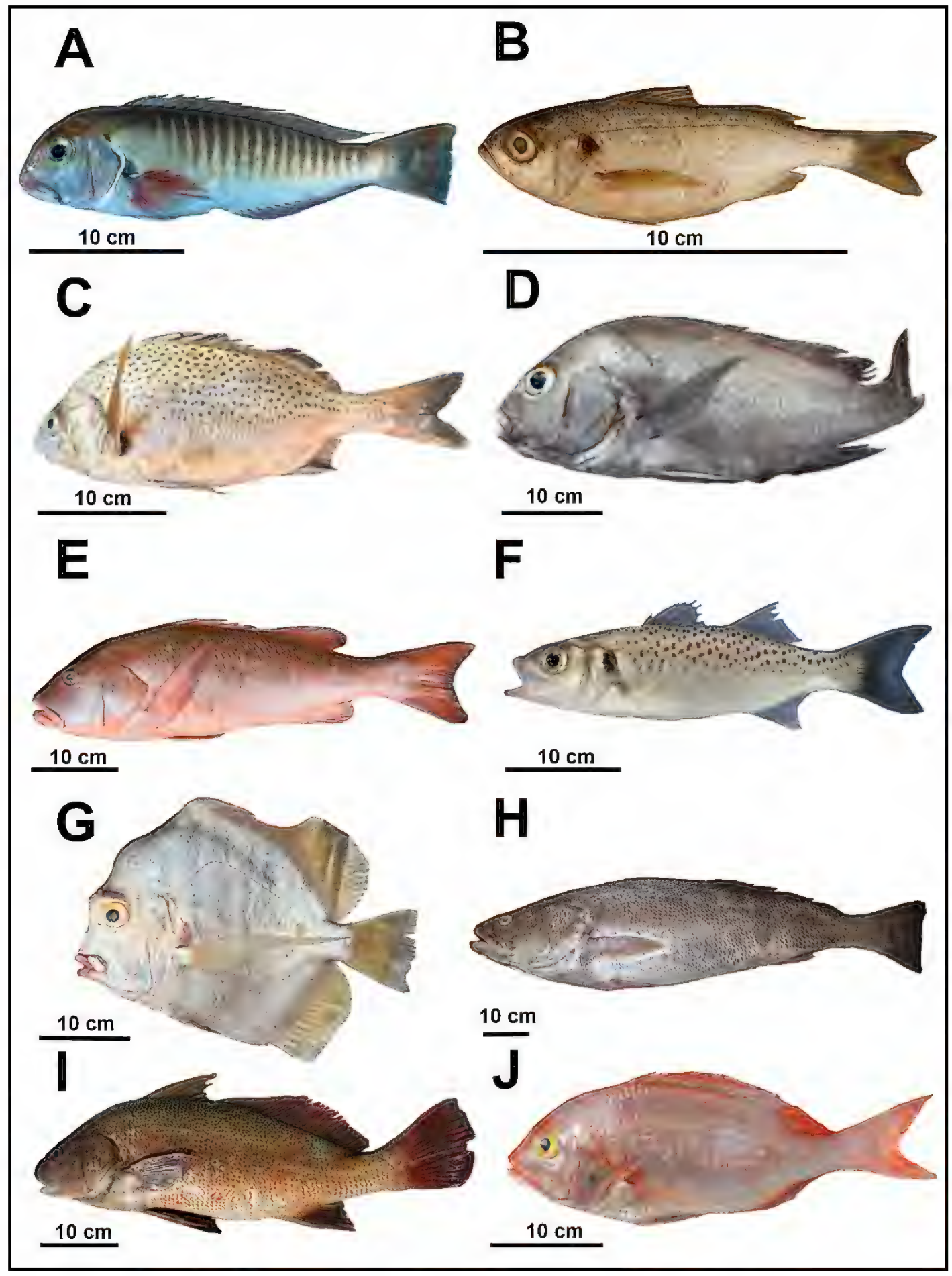

Figure 7. **A**. *Branchiostegus semifasciatus*. **B**. *Brachydeuterus auratus*. **C**. *Pomadasys perotaei*. **D**. *Plectorhinchus mediterraneus*. **E**. *Lutjanus goreensis*. **F**. *Dicentrarchus punctatus*. **G**. *Drepane africana*. **H**. *Argyrosomus regius*. **I**. *Sciaena umbra*. **J**. *Dentex canariensis*. © Niang Alioune: A, F, © Kristina Hopf: B, C, E, I, J, © André Freiwald: D, G, H.

One pair of small chin pores at symphysis of low lip and a single pit opening to a pair of pores at symphysis of lower jaw (Carpenter and De Angelis 2016c).

***Parapristipoma octolineatum* (Valenciennes, 1833)**

New record. MAURITANIA – Dakhlet Nouadhibou • Nouadhibou market; 20.9121, -017.0425; 14.III.2022; M. Dia & A. Niang leg.; fish-market survey (tissue sample); MAU-117.

Identification. Body elongate, compressed, and brownish, with four longitudinal whitish to bluish stripes along back and sides beginning on head; fins yellowish to brownish. Snout rounded, shorter than eye diameter. Chin with three pairs of pores, with anterior pair smallest (Carpenter and De Angelis 2016c).

***Plectorhinchus mediterraneus* (Guichenot, 1850)**

Figure 7D

New records. MAURITANIA – Dakhlet Nouadhibou • fishermen from Baie de l'Étoile; 21.0198, -017.0028; 08.III.2023; A. Knorrn, S.M.M. Moctar & A. Freiwald leg.; in front of the BdE opening; gill net of local fishermen (tissue sample); BdE-153; MAU-416.

Identification. Body oblong, compressed, greyish to brownish. Lips thick. Right and left elements of lower jaw posterior to symphysis separated at ventral midline by a fleshy isthmus. Chin with three pairs of pores, where the anterior pair smaller than the others. Fins greyish to brownish, the tips generally darker, especially pectoral fins (Carpenter and De Angelis 2016c).

***Lutjanus goreensis* (Valenciennes, 1830)**
Figure 7E

New record. MAURITANIA – Nouakchott Nord • Nouakchott market; 18.1033, -016.0263; 25.VI.2023; A. Knorrn, H. Taleb & A. Freiwald leg.; fish-market survey (tissue sample); MAU-516.

Identification. Relatively deep body and a pointed head. Enlarged preorbital bone and vomerine teeth that are arranged in a triangular patch with a pronounced posterior extension medially. Vivid pink grading to whitish on ventral portion with a narrow blue subocular band, or row of broken spots. Blue stripe on head, sometimes extending from near tip of snout to angle of operculum (Carpenter and De Angelis 2016c).

***Pontinus kuhlii* (Bowdich, 1825)**

New record. MAURITANIA – Dakhlet Nouadhibou • Nouadhibou market; 20.9121, -017.0425; 01.III.2022; M. Dia and A. Niang leg.; fish-market survey (tissue sample); MAU-25.

Identification. Body slightly compressed, and red or reddish pink, with small, scattered irregular, reddish-brown and yellow spots, sometimes most pronounced at base of dorsal fin. Head relatively large, covered with spines. Second and/or third dorsal spines relatively elongate. Lacrimal with two spines, both pointing posteroventrally over maxilla. Suborbital ridge with 3–4 spines. Second preopercular spine small or absent (Carpenter and De Angelis 2016b).

***Scorpaena normani* Cadenat, 1943**

New record. MAURITANIA – Dakhlet Nouadhibou • 20.9121, -017.0425; 03.VIII.2022; M. Dia & A. Niang leg.; trawl haul (tissue sample); MAU-42.

Identification. Body slightly compressed but robust, and bright-red, with dark spots. Head large, covered with spines. Pectoral fin with dark red spots. Membranes between anterior dorsal-fin spines deeply incised for more than ½ length of spine. Chest and base of pectoral fin without scales. No occipital pit, but with slight depressions anterior to parietal bones (Carpenter and De Angelis 2016c).

***Dicentrarchus punctatus* (Bloch, 1792)**
Figure 7F

New records. MAURITANIA – Dakhlet Nouadhibou • seagrass bed in the Baie de l'Étoile; 21.0383, -017.0234; 19.II.2024; A. Niang & A. Freiwald leg.; beach seine; BdE-7; IMROP 7, SMF 39659.

Identification. Body elongate, silvery-grey, bluish dorsally, and adults with small black spots scattered over back and sides; a conspicuous black spot between spines on upper rear edge of operculum. Eye diameter about ½ snout length. (Carpenter and De Angelis 2016c).

***Drepane africana* Osório, 1892**
Figure 7G

New record. MAURITANIA – Nouakchott Nord • Nouakchott market; 18.1033, -016.0263; 28.III.2022; M. Dia & A. Niang leg.; fish-market survey (tissue sample); MAU-137.

Identification. Body deeply rhomboid, strongly compressed, and primarily silvery-white, darker dorsally; a series of about 8 vertical dark bars frequently present but often faint on sides. Lips fleshy. Dorsal fin notched between spinous and soft portions, with 8–9 spines and 20–21 soft rays (Carpenter and De Angelis 2016c).

***Argyrosomus regius* (Asso, 1801)**
Figure 7H

New record. MAURITANIA – Dakhlet Nouadhibou • fishermen from Baie de l'Étoile; 21.0198, -017.0028; 09.III.2023; A. Knorrn, S.M.M. Moctar & A. Freiwald leg.; in front of BdE opening; gill net of local fishermen (tissue sample); BdE-153; MAU-425.

Identification. Body elongate, moderately compressed, and silvery-grey, with a bronze reflection on back; distal portions of caudal, anal, pelvic fins darker; inside of mouth yellowish to orange. Eye moderately small, its diameter less than interorbital width. (Carpenter and De Angelis 2016c).

***Pseudotolithus senegalensis* (Valenciennes, 1833)**

New records. MAURITANIA – Dakhlet Nouadhibou • fishermen from Baie de l'Étoile; 21.0198, -017.0028; 09.III.2023; A. Knorrn, S.M.M. Moctar & A. Freiwald leg.; in front of the BdE opening; gill net of local fishermen (tissue sample); BdE-153; MAU-593 – Nouakchott Nord • Nouakchott market; 18.1033, -016.0263; 24.I.2024; A. Knorrn, K. Hopf and K. Pfennings leg.; fish-market survey (tissue sample); NFM1-3.

Identification. Body elongate, moderately compressed fish, and silvery-grey to yellowish; back with distinct, oblique, dark, wavy lines along scale rows, extending to head and becoming horizontal posteriorly. Axils of pec-

toral-fin base dark, distal portions of caudal, anal and pelvic fin darkish. Eyes medium-sized. Long pectoral fins that reach beyond pelvic-fin tips (Carpenter and De Angelis 2016c).

Pteroscion peli (Bleeker, 1863)

New record. MAURITANIA – Nouakchott Nord • Nouakchott market; 18.1033, -016.0263; 28.III.2022; M. Dia & A. Niang leg.; fish-market survey (tissue sample); MAU-143.

Identification. Body short and robust. Body depth less than 3.5 times of total length. Silvery greyish olive colouration dorsally, lighter below. Pale to yellowish fins and a dark blotch at the pectoral fin bases. Mouth strongly oblique, pointing upwards (exceeding 45° angle). Gill rakes longer than gill filaments, 23 or more on first gill arch. Gas bladder with a pair of short arborescent appendages anterolaterally. (Carpenter and De Angelis 2016c).

Sciaena umbra Linnaeus, 1758

Figure 7I

New records. MAURITANIA – Dakhlet Nouadhibou • old pier; 21.0207, -017.0046; 30.I.2024; A. Knorrn, M. Sonnewald, K. Pfennings, K. Hopf and A. Freiwald leg.; fish trap (tissue sample); BdE-184; MAU-594 • fishermen from Baie de l'Étoile; 21.0198, -017.0028; 09.III.2023; A. Knorrn, S.M.M. Moctar and A. Freiwald leg.; in front of the BdE opening; gill net of local fishermen (tissue sample); BdE-153; MAU-421.

Identification. A deep-bodied and compressed fish with a strongly arched dorsal profile. Chin without barbel, but with 5 conspicuous mental pores. Body greyish to silvery coloured with a golden or metallic hue. Dusky lining on the dorsal corner of the operculum. Pelvic and anal fins black, soft dorsal fin and lower edge of caudal fins dark (Carpenter and De Angelis 2016c).

Dentex angolensis Poll & Maul, 1953

New record. MAURITANIA – Dakhlet Nouadhibou • Nouadhibou market; 20.9121, -017.0425; 03.III.2022; M. Dia and A. Niang leg.; fish-market survey (tissue sample); MAU-86.

Identification. Body oval, moderately deep and compressed. Straight head profile and a narrow interorbital space (21 to 25% of head length). Suborbital space wide (17 to 21% of head length). Body colouration red with silvery reflections. Head darker and belly lighter. A small dark area above the insertions of pectoral fins visible. The dorsal and anal are fins red except on their bases (Carpenter and De Angelis 2016c).

Dentex canariensis Steindachner, 1881

Figure 7J

New record. MAURITANIA – Dakhlet Nouadhibou • Nouadhibou market; 20.9121, -017.0425; III.2021; M. Dia and A. Niang leg.; fish-market survey (tissue sample); MAU-139.

Identification. Body oval, moderately deep and compressed. Head profile regularly convex except for a slight hump on the front. Colouration reddish with silvery reflections. The belly is lighter and head darker coloured. A dark red spot posteriorly on base of dorsal fin extending well beyond the scaly sheath. A dark area at axil of pectoral fin. Several more or less aligned dark spots on soft portion of dorsal fin (Carpenter and De Angelis 2016c).

Dentex gibbosus (Rafinesque, 1810)

New record. MAURITANIA – Nouakchott Nord • Nouakchott market; 18.1033, -016.0263; 28.III.2022; M. Dia and A. Niang leg.; fish-market survey (tissue sample); MAU-138.

Identification. Body oval, more or less elongate and compressed. Head profile with a conspicuous hump on front. Colouration reddish with bluish silvery reflections. Belly lighter and head darker. A small black spot behind posterior end of dorsal fin and a brownish black spot at axil of pectoral fin. Dark area at upper angle of operculum. One or two dark lines on soft part of dorsal fin (Carpenter and De Angelis 2016c).

Diplodus bellottii (Steindachner, 1882)

New record. MAURITANIA – Dakhlet Nouadhibou • old pier; 21.0207, -017.0046; 02.XII.2021; M. Sonnewald, S.M.M. Moctar and A. Freiwald; hand collection; CDP-21-01-1; IMROP 1, SMF 39609.

Identification. Body oval, moderately deep and compressed. Mouth slightly protrusible. eight chestnut-coloured, incisor-like teeth in each jaw, followed by two to three (usually two) rows of molars; a single row of molars behind the incisors. Background colour silvery grey, head darker; a dark, saddle-shaped bar on caudal peduncle and a dark blotch at origin of lateral line extending onto upper angle of operculum (Carpenter and De Angelis 2016c).

Diplodus cervinus (Lowe, 1838)

New record. MAURITANIA – Dakhlet Nouadhibou • Nouadhibou market; 20.9121, -017.0425; 23.VI.2022; M. Dia and A. Niang leg.; fish-market survey (tissue sample); MAU-58.

Identification. Body oval, deep and compressed. 10 to 12 incisor-like teeth in upper jaw, eight in lower jaw, followed by one to three (usually two) rows of small molars. Background colour silvery grey with golden reflections, five broad, dark cross-bars on sides, the first before dorsal fin, the last on caudal peduncle; a dark band on interorbital space extending onto eyes and cheeks (Carpenter and De Angelis 2016c).

***Diplodus puntazzo* (Walbaum, 1792)**
Figure 8A

New record. MAURITANIA – Nouakchott Nord • Nouakchott market; 18.1033, -016.0263; 25.VI.2023; A. Knorrn, H. Taleb and A. Freiwald leg.; fish makret survey (tissue sample); MAU-557.

Identification: Body oval and compressed. Snout pointed, jaws protrusible, lips thin. Eight conspicuously forward-pointing, chestnut-coloured, incisor-like teeth in each jaw, followed by one or two rows of small, very rudimentary molars. Six or seven alternatingly very dark and lighter cross-bars on sides and a large, dark, nearly annular bar on caudal peduncle (Carpenter and De Angelis 2016c).

***Diplodus sargus* (Linnaeus, 1758)**
Figure 8B

New records. MAURITANIA – Dakhlet Nouadhibou • seagrass bed in the Baie de l'Étoile; 21.0383, -017.0234; 19.II.2024; A. Niang and A. Freiwald leg.; beach seine; BdE-9; IMROP 28, SMF 39791 • fishermen from Baie de l'Étoile; 21.0198, -017.0028; 09.III.2023; A. Knorrn, S.M.M. Moctar and A. Freiwald leg.; in front of the BdE opening; gill net of local fishermen (tissue sample); BdE-153; MAU-419 • Nouadhibou market; 20.9121, -017.0425; 09.III.2022; M. Dia and A. Niang leg.; fish-market survey (tissue sample); MAU-45.

Identification. Body oval, moderately deep. Mouth slightly protrusible, lips thin. Eight incisor-like teeth (exceptionally 10) in upper, and eight in lower jaw, followed by molars arranged in three or four (rarely five) rows in upper and two or three (rarely four) rows in lower jaw. Nine alternating dark and attenuated vertical bars on body covering about two-thirds of body depth from the dorsal profile downward, a saddle-like dark blotch on caudal peduncle, just behind end of dorsal fin (Carpenter and De Angelis 2016c).

***Diplodus vulgaris* (Geoffroy Saint-Hilaire, 1817)**
Figure 8C

New record. MAURITANIA – Dakhlet Nouadhibou • Nouadhibou market; 20.9121, -017.0425; 14.III.2022; M. Dia and A. Niang leg.; fish-market survey (tissue sample); MAU-34.

Identification. Body oval, deep and compressed. narrow, chestnut-coloured, incisor-like teeth in each jaw, three to five rows of molars in upper and two to four rows in lower jaw, set behind the incisors and on sides of jaws. A large, very dark nuchal band extending from origin of dorsal fin to pectoral-fin insertions and to the posterior margin of operculum. A dark annular band on caudal peduncle extending onto the bases of posterior dorsal- and anal-fin rays (Carpenter and De Angelis 2016c).

***Lithognathus mormyrus* (Linnaeus, 1758)**
Figure 8D

New records. MAURITANIA — Dakhlet Nouadhibou • Nouadhibou market; 20.9121, -017.0425; 09.III.2022; M. Dia and A. Niang leg.; fish-market survey (tissue sample); MAU-75 — Nouakchott Nord • Nouakchott market; 18.1033, -016.0263; 22.I.2024; A. Knorrn, K. Hopf and K. Pfennings leg.; fish-market survey (tissue sample); NFM2-25.

Identifications. Body oblong and compressed. Head profile straight and the posterior nostril are slit-like. Body greyish with silvery reflections and darker colouration dorsally. 14 or 15 narrow dark brown to grey vertical bars on sides (Carpenter and De Angelis 2016c).

***Pagrus caeruleostictus* (Valenciennes, 1830)**
Figure 8E

New records. MAURITANIA — Dakhlet Nouadhibou • fishermen from Baie de l'Étoile; 21.0198 -017.0028; 09.III.2023; A. Knorrn, S.M.M. Moctar and A. Freiwald leg.; in front of the BdE opening; gill net of local fishermen (tissue sample); BdE-153; MAU-420 — Nouakchott Nord • Nouakchott market; 18.1033, -016.0263; 25.VI.2023; A. Knorrn, H. Taleb and A. Freiwald leg.; fish-market survey (tissue sample); MAU-512.

Identification. Body oval, moderately deep and compressed. Dorsal fin with 11 or 12 spines and nine to 11 soft rays. First two spines always very short, the third to fifth longest. Body pink with silvery reflections and large bluish black spots on back and sides (Carpenter and De Angelis 2016c).

***Sparus aurata* Linnaeus, 1758**
Figure 8F

New records. MAURITANIA – Dakhlet Nouadhibou • seagrass bed in the Baie de l'Étoile; 21.0383, -017.0234;

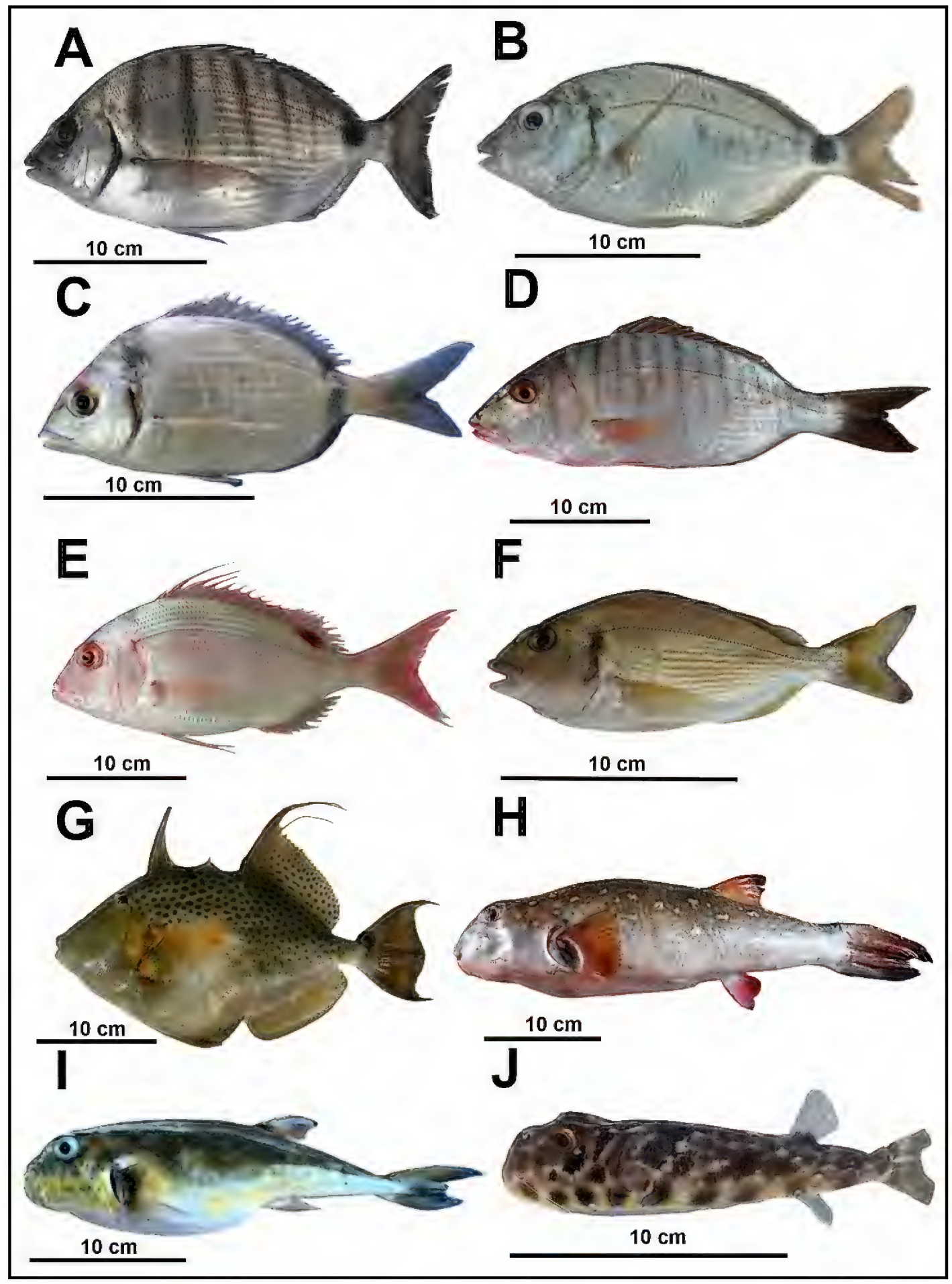

Figure 8. A. *Diplodus puntazzo*. **B.** *Diplodus sargus*. **C.** *Diplodus vulgaris*. **D.** *Lithognathus mormyrus*. **E.** *Pagrus caeruleostictus*. **F.** *Sparus aurata*. **G.** *Balistes punctuatus*. **H.** *Ephippion guttifer*. **I.** *Lagocephalus laevigatus*. **J.** *Sphoeroides marmoratus*. © Niang Alioune: B, C, E, G, © Kristina Hopf: A, D, H, © André Freiwald: F, I, © Alexander Knorrn: J.

19.II.2024; A. Niang and A. Freiwald leg.; beach seine; BdE-27; SMF 39798 • Nouadhibou market; 20.9121, -017.0425; 03.III.2022; M. Dia and A. Niang leg.; fish-market survey (tissue sample); MAU-78.

Identification. Body oval, moderately deep and compressed. Body colouration silvery grey. A large black blotch at origin of lateral line extending on upper margin of operculum where it is edged below by a reddish area. Dark longitudinal lines often present on sides of body. Dark band on dorsal fin; fork and tips of caudal fin edged with black (Carpenter and De Angelis 2016c).

Spondyliosoma cantharus (Linnaeus, 1758)

New records. MAURITANIA – Dakhlet Nouadhibou • Nouadhibou market; 20.9121, -017.0425; 21.II.2022; M. Dia and A. Niang leg.; fish-market survey (tissue sample); MAU-73.

Identification. Body oval and compressed. Dorsal profile of head depressed above eyes. Four to six rows of pointy teeth in each jaw. Silvery grey with bluish, greenish or pinkish reflections. Head darker, especially between the eyes and on snout. More or less discontinuous, yellow golden longitudinal lines on sides. Vertical fins darker than body (Carpenter and De Angelis 2016c).

Capros aper (Linnaeus, 1758)

New record. MAURITANIA – Dakhlet Nouadhibou • Scientific campaign; 20.9121, -017.0425; 03.VIII.2022; M. Dia and A. Niang leg.; trawl haul (tissue sample); MAU-13.

Identification. Body deep, compressed with a body depth distinctly more than the head length. Body covered with spinoid scales and each scale is hidden by a cluster of long slender spinelets. Head and body silver-gold coloured. Eye pale yellow and the spinous dorsal fin is black with a broad red margin. Dorsal fin deeply notched between spinous and soft parts, with nine or 10 strong, grooved spines and 23 to 25 branched rays (Carpenter and De Angelis 2016c).

Balistes punctatus Gmelin, 1789

Figure 8G

New record. MAURITANIA – Nouakchott Nord • Nouakchott market; 18.1033, -016.0263; 06.VII.2022; M. Dia and A. Niang leg.; fish-market survey (tissue sample); MAU-106.

Identification. Deep and moderately compressed body. Dorsal fin with three spines and 27 to 30 soft rays. Scales enlarged above pectoral-fin base and just behind gill slit to form a flexible tympanum. Body colouration generally greyish with a regular pattern of large round blue or green spots covering most of the body (Carpenter and De Angelis 2016c).

Stephanolepis hispida (Linnaeus, 1766)

New records. MAURITANIA – Dakhlet Nouadhibou • seagrass bed in the Baie de l'Étoile; 21.0383, -017.0234; 31.I.2024; A. Knorrn, S.M.M. Moctar, M. Sonnewald and A. Freiwald leg.; from local fisherman; gill net; photo documentation • fishermen from Baie de l'Étoile; 21.0198, -017.0028; 09.III.2023; A. Knorrn, S.M.M. Moctar and A. Freiwald leg.; in front of the BdE opening; gill net of local fishermen (tissue sample); BdE-153; MAU-423 • Nouadhibou market; 20.9121, -017.0425; 14.III.2022; M. Dia and A. Niang leg.; fish-market survey (tissue sample); MAU-31.

Identifications. Body deep and highly compressed. Region of back just behind dorsal spines without a deep groove to receive first dorsal-fin spine when it is not erected. Enlarged encasing scales at end of pelvis flexible dorsoventrally. First dorsal spine over posterior part of eye. Greenish, olive or brownish colouration. Sometimes with dark blotches (Carpenter and De Angelis 2016c).

Ephippion guttifer (Bennett, 1831)

Figure 8H

New records. MAURITANIA – Dakhlet Nouadhibou • Nouadhibou market; 20.9121, -017.0425; 14.III.2022; M. Dia and A. Niang leg.; fish market surve (tissue sample); MAU-22 – Nouakchott Nord • Nouakchott market; 18.1033, -016.0263; 24.I.2024; A. Knorrn, K. Hopf & K. Pfennings leg.; fish-market survey (tissue sample); NFM2-20.

Identification. Blunt body capable of rapid inflation by intake of water (or air). Nasal papilla not a simple tube, but expanded to two lateral and one posterior flap. Basal pigmentation of upper flanks and back a rich brown with a slight maroon tinge, the basal colour fading laterally to the unpigmented belly. Pigmented surfaces covered with discrete white spots, about a third to a fourth of the eye diameter (Carpenter and De Angelis 2016c).

Lagocephalus guentheri Miranda Ribeiro, 1915

New record. MAURITANIA – Nouakchott Nord • Nouakchott market; 18.1033, -016.0263; 28.III.2022; M. Dia & A. Niang leg.; fish-market survey (tissue sample); MAU-133.

Identification. Body varying from yellow-brownish to dark green and yellowish and with several dark bands over back: first band located between eyes; second band above gill opening; third band on posterior part of dorsal fin; fourth band around dorsal-fin base. Head blunt, with heavy jaws forming a beak of two teeth in upper and lower jaws. Caudal fin moderately emarginate-lunulate (Erguden et al. 2017).

Lagocephalus laevigatus (Linnaeus, 1766)

Figure 8I

New record. MAURITANIA – Nouakchott Nord • Nouakchott market; 18.1033, -016.0263; 28.III.2022; M. Dia & A. Niang leg.; fish-market survey (tissue sample); MAU-144.

Identification. Upper side of body uniformly grey or greenish grey; sides mostly silver; belly white. Head blunt, with heavy jaws forming a beak of two teeth in upper and lower jaws. Caudal fin distinctly concave and in adults its upper lobe longer than lower lobe (Carpenter and De Angelis 2016c).

Sphoeroides marmoratus (Lowe, 1838)

Figure 8J

New record. MAURITANIA – Dakhlet Nouadhibou • old pier; 21.0207, -017.0046; 17.II.2023; A. Knorrn, M. Sonnewald, S.M.M. Moctar & A. Freiwald leg.; hand collection; CdP-01; SMF 39612, MAU-228.

Identification. Body with a single pair of black lappets on the back about ½ distance from posterior margin of orbits to dorsal-fin origin. Ventral sides bordered with an even series of 11–14 sharply defined, round dark spots. Caudal fin with a black or very dark bar at its base and another on its posterior margin (Carpenter and De Angelis 2016c).

***Sphoeroides pachygaster* (Müller & Troschel, 1848)**

New records. MAURITANIA – Dakhlet Nouadhibou • Nouadhibou market; 20.9121, -017.0425; 03.VIII.2022; M. Dia & A. Niang leg.; fish-market survey (tissue sample); MAU-47 – Nouakchott Nord • Nouakchott market; 18.1033, -016.0263; 25.VI.2023; A. Knorrn, H. Taleb & A. Freiwald leg.; fish-market survey (tissue sample); MAU-592.

Identification. A pufferfish; body dorsally dark green or blue and ventrally white, with distinct dark spots around pectoral-fin base, extending to ventral surface. Head blunt, with heavy jaws forming a beak of two teeth in upper and lower jaws. Lower caudal lobe longer than upper lobe. Pectoral fin dark above, with lower ⅓ distinctly lighter (Carpenter and De Angelis 2016c).

DISCUSSION

We detected and identified 104 fish species in our study. This number represents about 25% of all currently known elasmobranch and actinopterygian species from the coastal zone of Mauritania (accessible via The Ocean Biodiversity Information System, https://www.obis.org). Moreover, by newly reporting not previously known from that region, our study increases by roughly 5% the number of fish species (Figure 9; Table 3).

These results show that there still is much more to discover and emphasize the need for additional investigations. To fulfil at least part of this need, our both institutes are engaged in building a local natural history reference collection in Nouadhibou, which has allowed for the deposition of our voucher specimens and will serve as a baseline for to future changes in biodiversity. Fish specimens and tissue samples that we collected during this study will be shared between the Senckenberg Research Institute and IMROP collections. The metadata will be entered into our collection databases and thus be automatically mirrored to OBIS and GBIF.

Among the 104 fish species observed, we found a mix of tropical, subtropical, and temperate fish species, as previously observed by Jager (1993) and Le Loeuff and von Cosel (1998). For example, *Chaetodon hoefleri* exhibits a typical tropical distribution for butterflyfishes and has one of the most northern distributions in the Eastern Atlantic. Similarly, there are widely distributed species, such as *Diplodus sargus*, which occurs from temperate to tropical regions off the coast of Mauritania. However, there is a thermal front—the Cape Verde Frontal Zone—in northern Mauritania, which separates the warmer southern waters from the cooler northern waters (Bambaye et al. 2010; Mahfoud et al. 2013) and limits the migration of some species. As a result, more species from temperate regions should be observed in the northern part of Mauritania than in the southern part. Overall, our results indicate that along the Mauritanian coast, a mixed-fish community can be found that is benefiting from the abundant nutrient resources.

The observed fish species and their habitats in which they were sampled reveal that, apart from the findings at the artisanal fish landing sites, areas with hard substrate have attracted high numbers of fish. This may largely be because such hard substrates, whether natural (sandstone and rocky islands) or man-made structures (old pier), provide surfaces for biofouling communities such as algae, sponges, cnidarians, and ascidians to colonize. Consequently, these reef-like ecosystems offering a wide range of food sources and hiding places that attract the marine life, a phenomenon generally known as the "reef effect". Another important shallow-water habitat are seagrass beds, which are not only known to host great numbers of marine life (Unsworth and Cullen 2010) but also since they provide valuable nursery areas for a diverse range of fish species, which are targeted by commercial and small-scale fisheries (Lilley and Unsworth 2014). Similar to hard-substrate habitats, seagrass beds provide abundant hiding places and food resources, which support a diverse fauna.

Due to the great availability of nutrients caused by oceanic upwelling and aeolian dust from the Sahara Desert, some of the commercially most profitable fish stocks in the Atlantic Ocean are found off the coast of Mauritania. This is also reflected economically, as a significant portion of the Mauritanian gross domestic product is generated by the fisheries sector (Hausmann et al. 2014). However, Mauritanian marine fisheries have undergone massive development in the last 20 years (Gascuel et al. 2007; IMROP 2014; FAO 2016), which has led to the overfishing of several fish stocks. The continuation of these intensive fishing activities poses a severe threat to marine ecosystems and to the local biodiversity (Colman et al. 2005). Consequently, some of the species targeted in artisanal fisheries shown in this study, such as *Trachurus trachurus* and *Pseudopeneus prayensis*, have already been classified as Vulnerable on the IUCN Red List. Cartilaginous fish species are particularly affected by fishing. For example, *Sphyrna lewini* and *Glaucostegus cemiculus* (both Critically Endangered), *Raja undulata* (Endangered), and *Rhizoprionodon acutus* (Vulnerable) are threatened, and we repeatedly observed these species in the artisanal fish markets. Due to these species' low fecundity, the recovery of their populations is very slow, making them highly vulnerable to overfishing and extinction. However, there are also some species, such as *Zeus faber*, *Chelon dumerili*, *Lutjanus goreensis*, and *Psettodes bennetti* that we frequently found in artisanal fish-landing places which have not been assessed by the IUCN. These species have been classified as Data Deficient. Some Red List assessments were done several years ago and likely require revision, especially considering the high fishing pressure and climate change. It is possible that the classifications of most commercially exploited species off the coast of Mauritania may have changed by now.

This work presents our current knowledge of the ichthyofauna from Mauritanian shallow-water habitats and artisanal fish markets. This list supports future ecosystem-based management by providing a baseline of frequently traded and sighted fish from shallow-water habitats and artisanal landing places. Further investigations

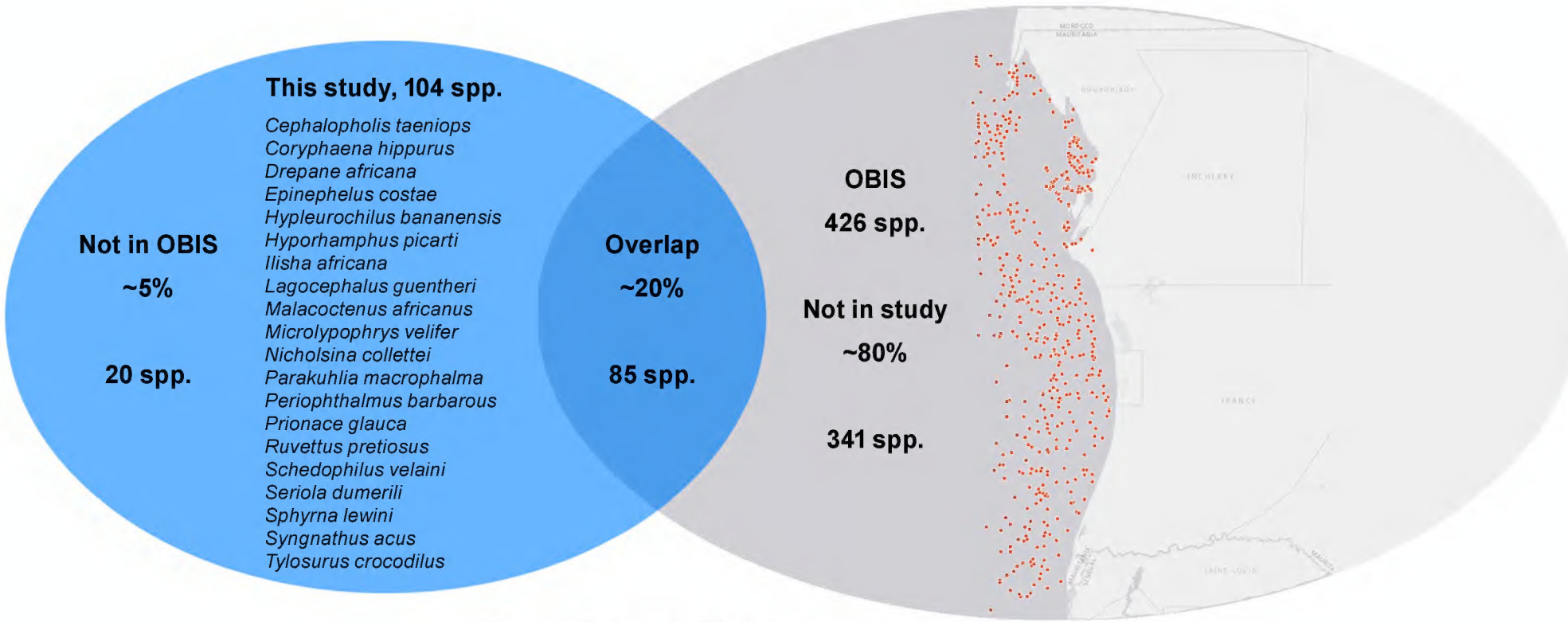

Figure 9. Comparison between all Actinopterygian and Elasmobranch species of this study and from the repository of the Ocean Biodiversity Information System (OBIS). OBIS site selection and point density to be seen on the map in the right circle.

Table 3. Species from this study that were not included within the OBIS databank.

Species	Species
Cephalopholis taeniops (Valenciennes, 1828)	*Nicholsina collettei* Schultz, 1968
Coryphaena hippurus Linnaeus, 1758	*Parakuhlia macrophthalma* (Osório, 1893)
Drepane africana Osório, 1892	*Periophthalmus barbarus* (Linnaeus, 1766)
Epinephelus costae (Steindachner, 1878)	*Prionace glauca* (Linnaeus, 1758)
Hypleurochilus bananensis (Poll, 1959)	*Ruvettus pretiosus* Cocco, 1833
Hyporhamphus picarti (Valenciennes, 1847)	*Schedophilus velaini* (Sauvage, 1879)
Ilisha africana (Bloch, 1795)	*Seriola dumerili* (Risso, 1810)
Lagocephalus guentheri Miranda Ribeiro, 1915	*Sphyrna lewini* (Griffith & Smith, 1834)
Malacoctenus africanus Cadenat, 1951	*Syngnathus acus* Linnaeus, 1758
Microlipophrys velifer (Norman, 1935)	*Tylosurus crocodilus* (Péron & Lesueur, 1821)

are needed to provide a more detailed and comprehensive list of the ichthyofauna occurring in Mauritanian waters. This information will be very valuable in the future, especially in the context of global environmental change enhanced by increased exploitation of fish resources. The information generated here highlights the urgent need of further biodiversity monitoring along the coast of Mauritania and Red List assessments the species there.

ACKNOWLEDGEMENTS

This study and the DNA barcoding was funded by the GIZ Meerwissen Project WASP (West African Biodiversity under Pressure) (contract 81248171) and by the Deutsche Forschungsgemeinschaft for the "Marine forests of animals, plants, and algae: Nature-based tools for the protection and restoration of biodiversity" (FR1134-21/1) within the framework of the ERA-Net Cofund BiodivRestore to AF and the Senckenberg Seed Money project "Understanding, Describing and Conserving Mauritania's Coastal Biodiversity". Great thanks go to Hidi Taleb for supporting this survey and in creating great sampling opportunities at the artisanal fish markets. Moreover, we give special thanks to the captain and crew of the RV *Amrigue* for conducting the sampling and transporting of our equipment. We also acknowledge the great support of the IMROP, especially from Cheikh Hejbou, for supporting our field trips along the Mauritanian coast and transporting our samples to our laboratories. Additional thanks go to Nicol Mahnken for creating high-resolution photos of the specimens. We also thank Katherine A. Turk and Kristina Hopf for help with language and grammar of the manuscript. Additional thanks go to Friedhelm (Fareed) Krupp for his support and scientific advice during the first field trip to Mauritania. Additional thanks go to the reviewers and academic editors of the Check List Journal for their guidance and support during the editing process of the article.

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